

Britany

Phanerogamia Part II

Mr

Asu Gray, M. D.

Botany

Phanerogamia continued.

Ord. Caprifoliacea,

1. Sambucus, Tourn.

1. Sambucus javanica, Reinw.

Sambucus javanica, Reinw. in Blume,
Bijdr. p. 657; DC. Prodr. 4. p. 322;
Miq. Fl. Ind. Bat. 2. p. 124.

Hab. Luzon; in the Majajai
Mountains. (A mere fragment, with
fruits fallen from the inflorescence.)

2. Sambucus tripetalus, Lindl.

Sambucus tripetalus, Lindl. in Mitch.
Jour. N. Holl.

S. tuberosa, R. Br. & Baer, DC. ined.

Hab. New South Wales? The specimen
was in a package marked "Bay of Islands,
New Zealand"; but it was probably collected in
Australia.

2. Alseuosmia, A. Bunn.

Alseuosmia, A. Bunn. (Spec. Bot. N. Zeal.,
~~Brook. Fl.~~ A. Zeal. in Ann. & Mag. Nat.
Hist. 2. p. 209; Hook. f. Fl. N. Zeal.
 1. p. 102.

1. Alseuosmia macrophylla, A. Bunn.

Alseuosmia macrophylla, A. Bunn. l.c.;
Hook. f. Fl. N. Zeal. 1. p. 102, t. 23.

Hab. Bay of Islands, New Zealand. (In fruit.)

1. Alseuosmia quercifolia, A. Bunn. ^{l.c.}

Hab. Bay of Islands, New Zealand.

Dr. Stoker, who has reduced several
 of Cunningham's species might have
 referred this, and even all of them
 except A. macrophylla, to A. Banksii,
^{the polymorphous}

2. Alseuosmia Banksii, A. Bunn.

Alseuosmia Banksii, atriplicifolia, &
paleiformis, A. Bunn. l.c.

A. Banksii, Hook. f. Fl. N. Zeal. 1. p. 102,
 t. 24.

Hab. Bay of Islands, N. New Zealand.
 (In very various forms.)

Ord. Rubiaceae.

~~Subord. I. Stellatae.~~

1. Rubia, Tourn.

1. Rubia angustifolia, Lin.

Hab. Madeira; between Funchal and Santa Anna. (A variety of R. tinctoria, no doubt.)

2. Galium, Tourn.

1. Galium Kelburn, Endl.

Galium Kelburn, Endl. Gen. p. 523; Gay,
Flo. Chil. 3. p. 186.

Rubia Kelburn, Cham. & Schlecht. in
Linnaea, 3. p. 229; DC. Prodr. 4. p. 592.

Hab. Chili, near Valparaiso and
Santiago. Peru, near Callao. Brazil,

2

in the Organ Mountains; the same as Rubia affinis, Gay; ~~int.~~; a narrow-leaved variety. Lima; young specimens without blossoms or fruit, apparently a narrow-leaved form of the same species, and Rubia mista, H. B. K.

2. Galium ciliatum, Ruiz & Pav.

Galium ciliatum, Ruiz & Pav. Fl. Peruv. & Chil. 1. p. 59

G. involucratum, H. B. K. Nov. Gen. & Spec. 3. p. 334.

Rubia ciliata, De Prodr. 4. p. 591.

Hab. Obrajillo, Peru. (Imperfect specimens, the corolla not present.)

3. Galium chilense, En H. l. c.

Galium chilense & Richardianum, Gay, Fl. Chil. 3. p. 180, 183, non Hook. & Arn.
Rubia chilensis, Molina? De Prodr. 4. p. 590.

R. Richardiana & R. pusilla, Gillies, in Hook. & Arn. Bot. Misc. 3. p. 362.

Hab. Rio Negro, North Patagonia.

4. Galium Gilliesii, Hook. & Arn.

Galium Gilliesii, Hook. & Arn. Bot. Misc. 3. p. 364; Gay, Fl. Chil. l. c.

G. trichocarpum, Gay, l. c. & specim., vix ab.

Hab. High Andes near Santiago, Chili.

5. Galium suffruticosum. Hook. & Arn.

Galium suffruticosum, Hook. & Arn. Bot.
misc. 3. p. 363; Gay, l.c.

Hab. Chili, near Santiago.

6. Galium Chamissonis. Hook. & Arn. ^{l.c.}

Hab. Valparaiso, Chili. (Perhaps
not distinct from the following species.)

7. Galium Aparine, Lin.

Hab. Orange Harbor, Freigia.

This can hardly have been introduced into the Antarctic regions, where it was found in the time of Cook's voyage, and has since been detected at various stations. In the United States, at least on the eastern side of the continent it does not occur in such situations as to appear unequivocally indigenous.

4

but the evidence on the ^{whole} favors the conclusion that it is so.

8. Galium productum, Lowe.

Galium productum, Lowe, in Trans. Camb.,
Phil. Soc. 4, p. 29.

Hab. Madeira.

9. Galium piliiferum, H. B. K.

Galium piliiferum, H. B. K., Nov. Gen. &
Spec. 3, p. 337; Lab. Prodr. 4, p. 612.

Hab. Peru, near Baños.

The peduncles are solitary at the end of the branches and short. Still the plant is ~~most~~ ^{at the ~~very~~ being} doubtless belongs to this species; ~~being~~ ^{being} wholly in fruit, the character of a campanulate corolla cannot be verified.

5
10. Galium obovatum, H. B. K.

Galium obovatum, H. B. K. Nov. Gen.
& Spec. 3. p. 334. t. 278.

(Peru, near.)
Hab. Obrajillo.

11. Galium Antarcticum, Hook. f.

Galium Antarcticum, Hook. f. Fl.
Antarc. 2. p. 303.

G. trifidum, D'Urville; Gaudich. Bot.
Freye. Voy. p. 135.

Hab. Orange Harbor. Fuegia.

12. Galium propinquum, A. Cunn.

Galium propinquum, A. Cunn. Spec.

Bot. N. Zeal. l. c. p. 207; Hook. f.

Fl. N. Zeal. l. p. 113.

G. umbrosum, Island. in Forst. Prodr. no. 500, ^(descrip.)

Hab. Lord Auckland Islands.

This is Stokes's variety hispidu-
lum; but the leaves are hispido-cili-
atis, rather than "ciliato-pilosis." Dr.
 Stokes did not collect this, nor any other
Galium upon the ~~Land~~ Auckland Islands,
 where, however, almost any New Zealand
 and herbaceous species might be expected.

13. Galium vagans, Stok. f.

Galium vagans, Stok. f. in Land. Jour.
Bot. 6. p. 461, & Fl. Tasm. 1. p. 170.

Stab. Hunter's River, New South
Wales.

14. Galium Gandichandi, St.

Stab. Hunter's River, New South
Wales.

This must be DeCandolle's G. Gau-
randi, which came from Port Jackson.
 But it is nearly allied to Dr. Stokes's G. cil-
iare, figured in the Flora of Tasmania.

~~Subord. II. Cinechomacra~~

3.

3. Phyllis, Linn.

1. Phyllis Nobla, Linn.

Hab. Madeira; on dry rocks near San Vicente, S. Found also by Dr. Vogel on the Corral. Formerly known from the Canary Islands only.

4. Coprosma, Forst.

A peculiarly North Sea genus, most conspicuous and most numerous in species in New Zealand, found in the northern hemisphere only in the Sandwich Islands, lat. 19° - 22° . From this group we have six species, all now

Dr As a Gray

Long before Clos published his *Hedysotis*
repens (which you make out to be an
connecting link between *Coprosma* and
Artemisia, calling it *Coprosma calycina*)
the plant had been described by Arnott
in the IIIrd vol of *North American bot.*
which thus pointed out its close affinity
to *Coprosma* —

Japonica M.
californica L
alba L
subfragilis And.
purpurea L
radicicola L

Published for the first time, although
all but one have laid long in
herbaria, and the two most remark-
able, ^(C. rhynchocarpa and C. ernodeoides) were gathered one of them by
Nelson in Cook's last voyage, the
other by ~~Nelson~~ in Vancouver's Voyage.
(as well as C. Menziesii, by Menzies)

* Australica.

1. Coprosma Billardieri, Hook. f.

Coprosma Billardieri, Hook. f. in Lond.
Jour. Bot. b. p. 465, & Fl. Tasman. 1. p.

165. Canthium quadrifidum, Labill. Fl. N. Holl. 1. p. 1.
Marquiesia Billardieri, ~~St. Paul. 4. p.~~ A. Rich. ^(69. 7. 94.)

Pub. (in Mem. Soc. Hist. Nat. Par.
5) p. 112; DC. Prodr. 4. p. 477.

Stat. New South Wales, near Sydney.

** Novo-Zelandica et Aucklandica.

2. Coprosma grandifolia, Hook. f.

Coprosma grandifolia, Hook. f. Fl.
N. Zeal. 1. p. 104

Ronabea australis, A. Rich.

Stat. Bay of Islands, New Zealand.
In flower and fruit.

We adopt Hooker's name since
our specimens plainly belong to his
C. grandifolia; but we remark that the
stamens, lobes of the corolla, and the dis-
tinct teeth of the calyx are often as many
as six, ~~and that if he had not~~
If Dr. Hooker had not pointedly assured
us that this, C. lucida, and Kaul's

C. robusta were ^{very} distinct species, we should have been disposed to unite them, as Forster probably did, under one species.

3. Coprosma robusta, Kaoul.

Coprosma robusta, Kaoul, ~~Pl. N. Z.~~
in Ann. Sci. Nat. ser. 3, 2, p. 121, &
Pl. N. Z., p. 23, t. 21; Hook f. l. c.

Stat. Bay of Islands, New Zealand;
in fruit.

For this species (and not, as does Dr. Hooker, to the preceding), Kaoul refers the Nomabea australis of A. Richard. We suspect that ^{maybe} ~~this~~ is, in part at least, the type of Forster's C. lucida. The specimen communicated under this name by Forster to the Banksian herbarium has ~~an~~ rather small leaves and short peduncles.

4. Coprosma foetidissima, Forst.

Coprosma foetidissima, Forst. l.c.; Stockf.
Fl. Austral. 1. p. 20, t. 13. & Fl. N. Zeal.
1. p. 105.

Hab. Ruckland Islands. (A
plant of abominable stench.)

5. Coprosma spathulata, A. Cunn.

Coprosma spathulata, A. Cunn.
Spec. Fl. N. Zeal. l.c. p. 207; Stockf.
Fl. N. Zeal. l.c.

Hab. Bay of Islands, New Zealand.
In fruit.

6. Coprosma rhamnoides, A. Cunn. ^{l.c.}

Hab. Bay of Islands, New Zealand.
In fruit.

7. Coprosma propinqua, A. Bunn. l.c.

Hab. Bay of Islands, and Waiaruru Bay, New Zealand.

The collection comprises the larger form, approaching C. foetidissima in appearance, and confounded by Cunningham with that ^{var. minor} species, and var. linearifolia, Hook. f. a very narrow-leaved state, as well as intermediate specimens. All with fruit only. This and the related species are fully characterized by Dr. Hooker.

8. Coprosma acroza, A. Bunn. l.c.

Hab. Waiaruru Bay, New Zealand.

9. Coprosma rotundifolia, A. Bunn. l.c.

Hab. Waiaruru Bay, New Zealand.
In foliage only; neither flowers nor fruit;
a form with small and pointed leaves.

10. Coprosma cuneata, Hook. f.

Coprosma cuneata, Hook. f. Fl. Antarc.
l. p. 21, t. 15, & Fl. N. Zeal. l. p. 110.

Hab. Auckland Islands.

11. Coprosma repens, Hook. f.

Coprosma repens, Hook. Fl. Antarc.
l. c. t. 16, & Fl. N. Zeal. l. c.

Hab. Auckland Islands.

Austro-
* * * Oceania,

(Tab.)

12. Coprosma persicæfolia, sp. nov.

C. ^{fruticosa,} glabra, dioica; stipulis ^(connatis) late trian-
gulatis cuspidatis; foliis membranaceis
penninerviis lanceolatis sensim
acuminatis, petiolo brevi; peduncu-
lis brevissimis paucifloris; calycis lim-
bo vix dentato; corolla profunde

14
quadrifida; drupa oblonga.

Mel.

Hab. Ovolau and Nanua-levu,
Fiji Islands.

Apparently an erect shrub, with slender branches: internodes very short; the nodes strongly annulate by the short and nearly persistent stipules. The leaves, especially on the more vigorous shoots, may be likened to those of the Beach; (whence the specific name), only they are of smaller size, 3 or 4 inches long, and two-thirds or three-quarters of an inch in width; on some specimens of only half this size. They are membranaceous, broadly lanceolate, tapering above gradually to a point, and at the base abruptly contracted into a petiole of 3 or 4 lines in length, glabrous, dull, scarcely paler beneath, where they are rather prominently feather-veined; the base of each primary vein ^(underneath) curiously enlarged into a thick and broad, solid, or at length cup-shaped, glandular-looking body. Inflorescence in the axils not ~~longer than the~~ exceeding the petiole.

Peduncles from one to three in each axil, very short, each bearing ~~about~~ ^(very small sessile) three, or perhaps more flowers. Ovary bibracteolate. Limb of the calyx truncate and very obscurely about ~~four~~ ⁴⁻ toothed. Corolla not more than a line long, deeply 4-cleft. The slender papillose styles much exserted. Young fruit narrowly oblong. - The above relates to the female plant alone; no specimens with male flowers were collected, so that the ~~plant~~ species is probably dioecious.

13. Coprosma? Taitensis. Sp. Nov.

C.? glaberrima, pruticosa; stipulis triangulatis acutis subconnatis persistentibus; foliis vix coriaceis oblongis obtusis basi in petiolum angustatis; pedunculis brevissimis vel breviusculis ~~2-5~~ ²⁻⁵ floris; drupa obovato-globosa, apice nuda.

(Society Islands)

Hab. Tahiti; in forests on the ~~the~~ mountains.

2

(wholly)
Shrub 6 to 8 feet high, glabrous.
Stipules much smaller and shorter than in
C. robusta, more persistent, united at the base.
Leaves between chartaceous and coriaceous
in texture, $1\frac{1}{2}$ or 2 inches long, 8 to 10 lines
wide, oblong or elliptical, obtuse, the base
narrowed into a petiole of 2 or 3 lines in length.
Flowers not seen. The ~~speci~~ two speci-
mens are in fruit, ^{of these} one with the axillary
peduncles very short, not longer than the
fruit, and probably not more than three
flowered; the other has the fruit-bearing
peduncles ^{about} half an inch long, bearing 3
or 5 spicately-arranged sessile drupes.
These are ~~glob~~ obovate-globose, not over 2
lines long, the calyx-line obsolete.
Pyrene 2, thick and bony. Seed erect,
lunate-incurved. The slender embryo and
albumen as in the genus *Cyprosma*.

This cannot be Forster's *Coffea*
triflora. It is apparently a new *Cyprosma*,
allied to *C. robusta*, but the blossoms are
~~unknown~~

unknown. Dr. Hooker's *C. petiolata*,
from Sunday Island (Milne, in cruise
of the Herald) resembles the Tahiti species,
but ~~is~~ pubescent, with paler and
rather rounder leaves, &c.

** Sandwicensis.

(Tab.)

14. Coprosma rhynchoearpa, sp. nov. 1

C. pubescens, dioica, fere glabra;
stipulis triangulari-acuminatis ^{taxi} ~~sub~~
connatis; foliis ^{chartaceis} oblongis seu lan-
cedato-oblongis acutis basi in
petiolum gracilem attenuatis; pedun-
culis paucifloris pedicellisve bre-
vissimis; fl. masc. calyce ~~brevissi-~~
~~mo~~ subintegro, corollae 6-7 fide (tubo)
breviore, fl. foem. 5-6-mero, calycis
tubo ultra ovarium globosum
nunc ^{nunc breviter} longissime producto (limbo cu-
pulari breviter 5-6-dentato) super
~~longitudinaliter cristatam~~
drupam instar rostri persistente.

Tab. Hawaii, Sandwich Islands,
in the districts of Puna and Waimea,
and near the Crater of Lua Pile. Also
gathered by Nelson, Macrae, and
Gardichand; also recently by Kery.

Shrub with slender branches,
 glabrous or a little pubescent
 when young. Stipules triangular
 and more or less pointed, 2 or 3 lines
 long, cuneate at the base, more or
 less puberulent or silky, pubescent,
 deciduous. Leaves thin, charta-
 ceous in texture, glabrous, oblong,
 sometimes oblong-lanceolate, acu-
 tish or slightly pointed, $1\frac{1}{2}$ to $2\frac{1}{2}$
 inches long, 6 to 15 lines wide, con-
 spicuously tapering at the base into
 a slender petiole of 3 to 10 lines in
 length; the veins not conspicuous.
 Flowers dioecious, ^{sessile} ~~pedicel~~ 3 to 5 in a cluster
 on ^{very short, and inconspicuous} a peduncle, which ~~at length~~ ~~are~~
 at length may become 3 or 4 lines in
 length, the cluster subtended by a
 pair of small bracts with their sti-
 pules. ~~Calyx of the~~ Male flowers
 with a very short, pateriform, nearly
 entire calyx, and a campanulate funnel-

shaped corolla, the broad limb of which
 is 6-7- cleft; the lobes short, oblong-
 lanceolate, valvate in aestivation. Sta-
 mens 6 or 7, as in the genus. Female
 flowers slender, ~~Ovary globular,~~
 Calyx-tube prolonged beyond the
 globular adnate ovary into a solid
 and abrupt beak, twice the length
 of the ovary itself, and as long as the
 tube of the corolla (about a line and
 a half), bearing at its summit a
 small, cupulate, and irregularly but
 sharply more or less 5-6-toothed limb.
 Corolla narrowly funnel-form; the limb
 5-6-cleft, with a valvate aestivation.
 Stamens none. Stigmas 2, very long
 and filiform, as in the genus. Drupe
 obovoid-globose, about 4 lines long,
 abruptly beaked by the ^{slender epigynous} ~~persistent~~ pro-
 longation forming as it were a stipe
 to the abruptly somewhat dilated small
 limb of the calyx persistent on its sum-
 mit; the whole beak varies from

one and a half to nearly three lines in length, and forms a remarkable feature, which suggests the specific name. Another peculiarity, observable in our specimens, is found in the 8 to 12 longitudinal salient crests of the drupe, nearly symmetrically disposed; these are very conspicuous upon the dried fruit, and do not disappear by soaking. They belong to the sarcocarp; there are no corresponding ridges upon the cartilaginous putamen. Ovale, seed, and embryo as in the genus.

[In Remy's specimens, recently received, the fruit is destitute of the ridges above-mentioned; and the beak of the fruit does not exceed a line and a half in length; ~~and~~ in some fruits upon the same individual it is reduced to a mere neck beneath the cupulate limb of the calyx.]

Plate *Oxyrosma rhynco-*
carpa: branch of a fruiting plant. Fig. 1. A small branch of a fertile plant, in flower. 2. A cluster of three female flowers, with their bracts and stipules, shown separate at 3, spread out. 4. Female flower separate. 5. Section of the ovary and calyx of the same. 6. A male flower. 7. Vertical

section of a fruit and its stalk. 8. Transverse section of the fruit. 9. Embryo detached. All except Fig. 1. magnified.

(Tab.)
15. Coprosma longifolia, Sp. Nov.)

C. glaberrima, fruticosa; stipulis in vaginam oblongam coalitis & basi circumscissa caducis; foliis subcoriaceis nitidulis lanceolatis utrinque acutis sublonge petiolatis; pedunculis fructiferis petiolo brevioribus capitato-plurifloris; drupa ovoidea calycis limbo brevi 5-7-dentato breviter apiculata.

Hab. Oahu, Sandwich Islands; in the mountains behind Honolulu, where it was also gathered by Gandichaud.

We have no flowers of this species. It is very well marked by its sheathing stipules, long and narrow willow-like leaves, and the entire

Smoothness of every part. The stipules are from 4 to 6 lines in length, smooth, chestnut-colored, united into a sheath which is 2-4-lobed at the summit, and early caducous by ~~separating~~ circumcision at the base and also by splitting down one side. Branches very leafy, the internodes generally shorter than the petioles. Leaves very smooth, thickish, bright green, lanceolate, or broadly linear-lanceolate, acute at both ends, $2\frac{1}{2}$ to 4 inches long, 6 to 9 lines wide, and of the same width for nearly their whole length, the primary ^{slender and} veins, not prominent, but very numerous: petiole ~~of~~ the larger leaves almost an inch in length, of the smaller about half that length. Fructiferous peduncles 2 to 5 lines long, bearing a capitate cluster of several ~~drupes~~, (sometimes as many as 10) ovoid, red drupes, of about 3 lines in length, crowned with a small, ~~and~~ minutely 5-7-toothed limb of the calyx. Endocarp ~~4-7-angled~~, bony pyrene. Embryo, &c. as in the genus.

Plate ²³ Co. Coprosma longifolia, Fig. 13,
Drupe, of the natural size, 14, longitudinal, and 15, trans-
verse section of the same, magnified.

16. Coprosma foliosa, Sp. Nov. (Tab.)

C. fruticosa, dioica, glabra; stipulis
triangulari-acuminatis basi sub-
connatis; foliis chartaceis lanceola-
tis seu oblongo-lanceolatis utrinque
acutis vel acuminatis, ~~in petiolum~~
~~gracilem~~ attenuatis; pedunculis pe-
tolo gracili brevioribus apice pau-
cifloris; floribus 5-7-meris; drupa
obovato-globosa apice nuda.

Euarthronia foliosa, Nutt. ined. in
Herb. Hook.

Hab. Oahu, Sandwich Islands,
also collected ^{menzies} by } Gaudichaud, Nuttall,
and Seemann, and recently by Remy.

Only a fragment of the male
plant of this being found in the
collection, ~~it is~~ the character is completed

from specimens gathered by Seemann.
 It most resembles *C. longi-*
folia; but the ^{caducous} stipules are quite dif-
 ferent, ~~being~~ and like those of the ^{and} other species generally, being small, acu-
 minate from a broad base or very short
 sheath; ~~they are~~ they are only 2 lines
 long and pubescent, at least on their
 margins: otherwise the plant is gla-
 brous. The ^{crowded} leaves, also are only $1\frac{1}{2}$ to
 2 inches long, more tapering both
 upwards and downwards, the broadest
 part in the middle from a third to
 half an inch in width, the texture
 chartaceous rather than coriaceous, the
 veins very fine and numerous: petiole from
 a quarter to half an inch in length,
 slender. Peduncles $1\frac{1}{2}$ to 3 lines long, in
 the male plant terminated by a cluster of
 only 3 or 4 sessile flowers involucre by
 a ~~very small~~ pair of bracts or reduced leaves
 shorter than the corolla accompanied as
 usual by its pair of stipules. Calyx (male)
 patriflorous, minutely 6-7-toothed, shorter than

the tube or contracted base of the 6-7-
clift corolla. Stamens 6 or 7. Female
flowers not observed. Drupes in the
specimens solitary, obovate-globose, hairy
with a rounded naked summit, the
limb of the calyx obsolete.

The species is quite intermediate
between C. longifolia and C. Menziesii;
var. B.

Plate. B. Cypripedium foliosum.
Fig. 10. Fruit and leaves, of the natural size.
11. Magnified vertical section of a drupe.
12. Embryo from the same.

17. *Coprosma pubens*, Sp. Nov.

C. fruticosa, dioica; stipulis latel-
latoideis ~~latis~~ connatis strigoso-seri-
cis; foliis chartaceis obovato-oblongis
oblongiore basi in petiolum attenua-
tis supra glabris subtus reticu-
lato-venosis ramulisque pubescenti-
bus; pedunculis petiolo brevioribus
vel subnullis; floribus confertis, mas-
culis 6-7-meris, calyce irregulari,
corolla breviter infundibuliformi. —

Variat, a. drupis secus ramos fere subs-
sessilibus basi bibracteolatis oboideis
rostello brevi apiculatis, et

Var. B. ^{Kauaiensis} drupis oboatis obtusissimis ^{nimis} pluf-

sessilibus in pedunculo communibus. ~~hab.~~

Hab.

Hab. Forest and high Bullock
Plains on the side of Mouna Kea,
Hawaii; Var. B. ^{Mountains of} Kauai, Sandwich Islands.

Apparently a much branched and straggling shrub, dioecious; the ^{more or less hairy} branchlets of the female plant ^{below} squarrose with the crowded vestiges of stipules, abbreviated peduncles, &c., the leaves crowded at their summit. Stipules ^{broadly} dilated-triangular, $1\frac{1}{2}$ to 3 lines long, connate for nearly half their length, strigose externally with an appressed silky-hirsute pubescence which is more or less deciduous. Leaves of a firm ~~but rather~~ ~~thin~~ texture but rather thin, dull, glabrous above except a slight pubescence on the midrib and principal veins, but ^{and pale} downy with a short pubescence beneath, especially on the midrib and the numerous rather prominent veins and reticulated veinlets, $1\frac{1}{2}$ to $2\frac{3}{4}$ inches long, at most one inch broad, obovate- or ovate-oblong, obtuse, below tapering gradually into a rather slender petiole of a quarter or half an inch in length. We possess

one specimen with male flowers, another with fruit, but no female blossoms. Male flowers several in a loose head subtended by a pair of foliaceous bracts of ~~sea~~ about the length of the flower-bud, and ^{commonly} raised on a peduncle of not more than 3 lines in length. Calyx ^{nearly} 2 lines long, campanulate, irregular, being unequally cleft into 3 or 4 short and broad lobes, and some of these 2-toothed at the apex. Corolla 3 or 4 lines long, short-infundibuliform, the narrow tube expanding into a broad throat or limb divided into 6 or 7 occasionally 7 lanceolate lobes. Stamens as many, nearly or quite free from the corolla, with the at length elongated filaments and large ~~and linear~~ pointed anthers of the genus. The fruiting-specimen (from Hawaii) bears apparently single drupes on peduncles of only a line or at most a line and a half in

length. The drupes are ovoid, 4 lines long, and generally pointed with an abrupt beak about half a line long, on which there is no trace of a calyx-teeth. ~~The~~ Its structure and that of the seed, &c. are as in the genus.

The var. β , from the ~~known~~^{specimen in} mountains of Kauai, is a small fruit, Drupe 3 sessile upon the summit of a peduncle of a quarter or half an inch in length, and often with 2 or 3 sessile ones lower down on the peduncle, rather smaller than in var α , and more ob-ovate, the very obtuse summit ^{and} crowned with a ~~depressed~~ flat areola. The difference in the inflorescence is probably of no account; the ~~blunt~~ summit of the fruit being blunt and naked (as in most species of the genus) alone causes some hesitation in referring the specimen to the present species. An imperfect ~~specimen~~^{from Kauai} with one or two male blossoms and smaller, less pubescent leaves probably belongs to this species.

18. Cypripedium Menziesii, Sp. Nov.

- C. puticosa, dioica; ramis puberulis;
 stipulis brevibus connatis sericeo-
^{vel strigoso-}pubescentibus; foliis obovatis seu
 ovalibus raro oblongis ^{reticulatis} glabris;
 pedunculis paucifloris brevibus
 saepe aggregatis vel compositis;
 floribus 5-11-meris; calyce cupulato
^{breviter}dentato; drupa subglossosa calycis
 limbo brevi coronata. — Variat,
 a. foliis chartaceis demum coria-
 ceis ovalibus seu ellipticis acutis
 vel obtusis basi in petiolum longi-
 usculum ^{vel} brevem contractis. — β .
^{minoribus} foliis, fere chartaceis longiuscule peti-
 olatis; pedunculis femineis, ~~seorsim~~
~~ramulos breves~~ axillares geminis
 ternisve 1-3-floris gracilibus. —
 γ . foliis minoribus spatulatis obo-
 vatisve crasse coriaceis in ramulos
 confertissimos ^{breviter petiolatis;} drupas fere sessilibus.

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Stat. Hawaii, Sandwich Islands.
(~~Nees, Macrae, Douglas, Remy~~);
(~~Syrius Bay, Macrae~~), in the districts
of Puna and Waimea. Mountains of
Kauai (a thick-leaved, 11-androus
form). B. Hawaii? Gandichand. J.
On Mouna Loa and Mouna Kea;
also ~~in the~~ on the mountains of
Maui.

This species vindicates the character
for variability which ~~this species~~ ^{also}
the genus is noted for in the New Zealand
and Flora. Indeed the woody plants of
the Pacific islands generally seem to be
remarkably polymorphous. Detached
specimens of this single species, as I
must regard it, would undoubtedly
be referred to three or four different types.
The more luxuriant and thinner-
leaved forms ^{were} probably collected in for-
ests; those ~~with~~ thick- and smaller leaves,
crowded on stout branches or their rigid
spurs or ~~tra~~ short branchlets, are from

the naked and exposed region of the mountains above the limit of trees — Branches in all more or less pubescent when young. Stipules short and broad, ^{generally acute or pointed,} more pubescent, especially in the condensed forms, where they are rather persistent. Leaves always glabrous, $1\frac{1}{2}$ or 2 inches, or in var. γ , reduced to an inch or less in length, obtuse, ^{absolutely} acute, or rounded at the apex, acute or tapering at the base, dull, the primary veins slender and numerous, the veinlets much reticulated; petioles 2 to 5 lines long. Flowers dioecious. Peduncles solitary or 2 or 3 together from the axils or from axillary and leafy-bracted short spurs, those of the male flowers very short; of the female 2 to 3 lines long, or in var. β , 3 to 5 lines long, bearing from one to three flowers; in var. γ , both the male and flowers and the fruit sessile or nearly so in the axil, or on short spurs. Calyx of the male flowers patenteriform, the margin acutely denticulate; its adnate tube

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in the female flowers ovoid, ^(more or less) contracted under
the small and cupulate 5-9-toothed limb.
Corolla short-funnel form, usually 7-9-
cleft, rarely 5-cleft, ⁱⁿ the male flowers
of one specimen 11-cleft, and the sta-
mens of the same number. Filaments,
anthers, &c. as in the genus. ^{Stigmas} ~~Style~~ some-
times 3 or 4, very long. Drupes globu-
lar, about 3 lines long at maturity,
~~expanded with~~ not produced at the apex, but
crowned with the short sometimes rather
conspicuous 5-9-toothed ^{remains of the} ~~limb~~ limb of the
calyx. Pyrene long. Albumen and seed
as in the genus.

A form of var. β , with remarkably
acute leaves approaches *C. acutifolia*, Hook.
f., in Hook. & Hook., from Normande group,
Lousiade Archipelago?

19. *Coprosma ernodeoides*, Sp. Ar.

C. fruticosa, procumbens, dioica, gla-
bra (nisi ramulis junu ramis juni-
oribus); stipulis brevissimis connatis;
foliis confertissimis parvis sub-
linearibus crassis aveniis nitidis
^{sempervirentibus} ~~marginibus~~ parce hispidulis; floribus
~~sessilibus~~ ^{sessilibus} fasciculis sessilibus ram-
ulos terminantibus ~~totis~~ 4-meris;
corolla tubulosa; ~~infundibuliformi~~.
drupa globosa.

Hab. Hawaii, Sandwich Islands;
on the lava-plains and near the
crater of Lua Pele. Also long
since collected by Menzies, and more
recently by the ^{late} Rev. J. Dill, and lately
by Remy.

A procumbent shrubby plant,
glabrous, except a minute pubescence
on the youngest parts, especially the long
and trailing branches. These, and still

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more than numerous short and rigid branchlets are thickly covered with the linear or linear-oblong, thick, and rigid, shining, sessile, acute or obtusish, ~~veinless~~ evergreen leaves. These on vigorous shoots are about half an inch long and a line and a half wide, on the lateral branchlets generally shorter and blunter, the midrib rather evident, but no veins are visible; the whole surface minutely and thickly punctate under a lens, the acute margins sparsely ~~beset with~~ ciliate with short bristles. Stipules very short, blunt or truncate, rather hairy, connate with ~~each~~ the base of the leaf on each side. Male blossoms not seen. Female flowers solitary and sessile at the apex of the branchlets, their long stigmas projecting from among the leaves. Limb of the calyx nearly as long as the short tube, deeply 4-cleft; the lobes oblong-lanceolate. Corolla 3

lines long, tubular, slightly infundibuliform, 4-lobed at the apex. Stigmas nearly an inch in length. Drupes globose, nearly half an inch long when ^{black} - crowned with the 4 distinct small calyx-teeth: ~~sarcocarp~~ ^{sarcocarp}. Very copious ~~and fleshy~~ ^{sarcocarp}. Pyrene small, plano-convex, between cartilaginous and bony, smooth. Seed erect. Embryo almost as long as the firm fleshy albumen; cotyledons oval.

A strikingly well-marked species with aspect and foliage so like Ernodea littoralis as to suggest the specific name here applied to it.

It appears that Coprosma calycina, May in Proceed. Amer. Acad. 4, p. 18, was published by Arnott, almost twenty years before, under the name of Leptostigma, in Hook. Jour. Bot. 3, p. 270. (L. Arnottianum, Walp.), and its affinity to Coprosma pointed out. The genus I suppose will merge in Coprosma.

Nertera, Banks Island.

1. Nertera depressa, Banks Island.

Hab. Orange Harbour, Fuegia, Mountains of Tahiti, Society Islands, Mountains of Oahu and Hawaii, Sandwich Islands. Majaijai Mountains, Luzon; the forma acutifolia of Miquel.

The ^{habitats} ~~stations~~ in the Society and Sandwich Islands are new, but not unexpected for a plant so widely diffused over the remotest parts of the Southern Hemisphere, and in ~~the~~ America reaching to Venezuela, and even to the mountains of Cuba, if some narrower-leaved specimens gathered by Mr. Wright, without flowers or fruit belong here. The Sandwich Islands, lying under the northern tropic, afford the most northern station known. New Zealand, ~~and Tasmania~~, the Auckland Islands, the Falklands, Tristan d'Acunha, Tasmania, Java, Luzon, & and ^{probably} ~~perhaps~~ Madagascar ^{of this little plant.} are other habitats. The specimens from Luzon have acute leaves (though broadly ovate or subcordate), and are probably the same as those of Burningham, which Dr. Hooker inclined to refer to his N. burninghamii of New Zealand. This, according to Miquel, is the prevailing form in the Indian Archipelago, and is probably not really distinct from N. depressa.

2. Nertera dichondraefolia, Hook. f.

Nertera dichondraefolia, Hook. f. Fl. N.

Zeal. 1. p. 112, t. 28.

N. gracilis, Raul. Prodr. Ann. Sci. Nat. l. c. p. 121.

Cresophila? dichondraefolia, A. Cunn. Spec. Bot. N. Zeal. l. c. p. 208.

Tab. Bay of Islands, New Zealand,

(The only part of the world where N. depressa
is associated with other species.)

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6. Pomax, Soland.

1. Pomax umbellata, Soland.

Pomax umbellata, Soland. in Garton. Fruct.

1. p. 42, t. 24; A. Rich. Mem. Rub.

Opercularia ^{p. 55, t. 3.} umbellata, Juss. in ^{Alleg. Ann.} Mus. Par. 40, p. 42b.
(Garton, l.c.)

Var. a. nirta,

Pomax nirta, DC. Prodr. 4, p. 615.

Var. β. glabra.

Pomax glabra, DC. Prodr. 4, p. 615.

Hab. Sydney and Hunter's River
New South Wales. Both varieties, and
an intermediate form.

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7. Opercularia, Gortn.

1. Opercularia paleata, Young.

Opercularia paleata, Young in Linn.
Trans. 3. p. 30. t. 5; Juss. in ~~Ann.~~ Ann.
Mus. Par. l.c.; DC. Prodr. 4. p. 116.

O. oeymoides, rubioides, & ligustri-
folia, Juss. l.c.?

Hab. New South Wales; near
Sydney, ~~H.~~ Cook's River. &c. (New Zealand
and ?)

These larger and broad-leaved forms
all appear to belong to one polymor-
phous species, which perhaps is ^{the original} O.
aspera and O. diphylla of Gortner,
one or both. One of our specimens,
indeed, with oblong and ovate leaves and
considerable hairiness, is ticketed as from
the Bay of Islands, New Zealand. But
some plants undoubtedly gathered at Syd-
ney have been erroneously so ticketed.
The reason for suspecting such mistake

in the present instance is that
no one else since Banks's Voyage
has collected an Opercularia in
New Zealand, which could hardly be
if any grow around the Bay of Islands.
Perhaps the original species are really
Australian, and this should take the
name of O. diphylla.

2. Opercularia hispida, Speng.

Opercularia hispida, Speng., Syst. 1. p. 385,
Ob. Prodr. 4, p. 615.
O. aspera, Juss. in Ann. Mus. Par. l.c.
p. 427, t. 70, f. 1.

Hab. Hunter's River, New South Wales.

3. Opercularia myrsinifolia, Juss.

Opercularia myrsinifolia, Juss. in Ann. Mus.
Par. l.c. t. 71, f. 1; Ob. l.c.

Hab. Sydney, New South Wales.

4. Opercularia sessiliflora, Juss.

Opercularia sessiliflora, Juss. in Ann.
Mus. Par. l.c. t. 70. p. 2; Db. l.c.

Hab. Sydney, New South Wales. A
depauperate and smaller-leaved form.

8. Spermacoe, Linn.

Spermacoe & Borreria, G. Meyer. Fl. Esseq.
p. 79; Db. Prodr. 4. p. 540, 552.

1. Spermacoe (Borreria) verticillata, Linn.

Spermacoe verticillata, Linn. Spec. 1. p.

102 (Dill. Coll. p. 369, t. 270, f. 270 358,

Borreria verticillata, G. Meyer. Fl. Esseq. p. 83;
Db. l. c.

Borreria Kohautiana, Cham. & Schlecht.
in Linnaea, 3. p. 311; Db. l. c.; Webb. Spic.
Grog. & Beuth. Fl. Nigr. in Nigr. Fl.
p. 133, 422.

Bigelovia verticillata & commutata, Sprang.
Syst. 1. p. 404.

Hab. Rio Janeiro, Brazil. St. Jago,
Cape de Verde Islands.

No good marks ~~are evident~~ appear to distinguish
the African from American forms which
Linnaeus united in his Spermacoe verticillata.
The fruit is glabrous in our specimens from St.

Jago, and their dehiscence is the same in both.

The difference between ~~Asterum~~ Borreria and Spermacece, if not unimportant in character, are not always sufficiently marked to render a generic separation advisable.

2. Spermacece (Borreria) ferruginea, St. Hil.

Spermacece ferruginea, St. Hil. Pl. Mus. Bras.
no. 13, t. 13.

Borreria ferruginea, Db. Prodr. 4, p. 547.

Hab. Rio Janeiro, Brazil.

3. Spermacece (Borreria) asperula, ^(l. c.?) Db. ~~Prodr.~~

Hab. Rio Janeiro, Brazil. (Specimens too young for proper determination.)

6. Spermacoe (Borreria) Roxburghiana, ^{Wall.}

Spermacoe Roxburghiana, Wall. Cat.
no. 6186.

Borreria Roxburghiana, Night. & Arn.
Prodr. Fl. Ind. Or. 1. p. 437.

Hab. Luzon, near Manilla.

7. Spermacoe articularis, Linn. f.

Hab. Singapore. ~~A~~ One of the
states varying into S. hispida.

8. Spermacoe tenuior, Linn.

Hab. St. Jago, Cape de Verde Islands.

Rio Janeiro, Brazil. Callao, Peru.

4. Spermacoce (Borreria) parviflora.

Borreria parviflora, Meyer, Fl. Essq. p. 83; Db.
Prodr. 4, p. 554; Benth. in Rost. Prodr. Amer.
Centr. p. 4.

B. ramisparsa, Db. l. c. (Spermacoce ramisparsa,
Pohl. in Db.)

B. prostrata, Miq. Stirp. Surinam. p. 177.

Hab. St. Jago, Cape de Verde Islands.
(Not before enumerated as from the Canaries.)
these islands.

5. Spermacoce (Borreria) alata, Aublet.

Var. hirsutula: pube brevi scabro-hirta,
foliis obovatis obtusis.

Hab. Rio Janeiro, Brazil.

The Guiana Plant as described
by Aublet and by DeCandolle is said
to be glabrous. But Hostmann's no.
975, which otherwise accords with Aublet's
figure, is little less hairy than our speci-
men from Brazil, which, however, has
rounder leaves. The in both is short-obovate,
and ~~dehiscent~~ both cocci are dehiscent
in the manner of Borreria. The angles of
the stem are strongly winged.

9. *Diodia*, Linn.

1. *Diodia maritima*, Schum., DC.

Hab. St. Jago, Cape de Verde Islands,
not before recorded from these islands; but
a native of the adjacent parts of the
continent.

2. *Diodia conferta*, DC.

Diodia conferta, DC. Prodr. 4. p. 563.

Hab. Rio Janeiro, Brazil.

Only a single specimen was collected; but it suffices to ~~complete the~~ give the characters of the flower and the fruit, both of which were unknown to Sebaudille, who ^{established the species} ~~described~~ from a barren plant. — Leaves half an inch or less in length; the lower oblong; the upper ovate or slightly cordate, all closely ^{aristate-apiculate} serrate. The strong and numerous setae of the stipules are about the length of the internodes, even when these are most developed, as ~~at~~ in the middle

of the stem. Corolla funnel-form,
4 lines in length, minutely hairy.
Calyx-teeth 4; two of them lanceolate
and fully half the length of the fruit; the
~~other~~ intermediate ones broad and rounded
one half shorter. Fruit of this genus, short
obovate and somewhat 4-sided, densely
~~clothed with~~ hispid with long and
white bristles, in the manner of some
Galia.

10. Triodon, Db.

1. Triodon glomeratus, Db.

Triodon glomeratus, Db. Prodr. 4. p. 566
Diodia Brasiliensis, Spring. Syst. 1. p. 406.

Hab. Organ Mountains, near Rio Janeiro,
Brazil.

2. Triodon ~~laxus~~ paradoxus.

Diodia paradoxa, Cham. in Linnaea. 9. p. 216.

Hab. Organ Mountains, near Rio Janeiro, Brazil.

This ~~is~~ belongs to the genus *Triodon* and is related, not to the other Brazilian species, but to the Lintensian *T. laxus* of Burtham.

11. Richardsonia, Kunth.

1. Richardsonia scabra, St. Hil.

Hab. Rio Janeiro, Brazil. Widely dispersed over all the warmer parts of America. It is adventive in California, but probably of recent introduction. Remy found it at the Sandwich Islands.

12. Cruckshanksia, Hook. & Arn.

1. Cruckshanksia hymenodon, Hook. & Arn.

2. Cruckshanksia glacialis, Poepp. & Endl.

Hab. Andes of Chili above Santiago, near the snow-line.

13. Mitracarpium, Zucc.

Mitracarpium [melius Mitracarpium],
Zucc. in Röm. & Schult. Syst. Mant.
3. p. 210; Cham. & Schlecht. in Linnaea
3. p. 358; A. Rich. ~~Art.~~ Mem. Bot.
p. 71. t. 4; Db. l.c.

1. Mitracarpium Senegalense, Db.

Mitracarpium Senegalense, Db. Prodr.
4. p. 572, Webb, in Niger Fl. p.
133.

Hab. The specimen was ticketed
"Rio"; but it is more likely to have
been gathered at the port last pre-
viously visited, namely St. Jago, Cape
de Verde Islands.

2. Mitracarpium Salzmannianum, Db. l.c.

Hab. Rio Janeiro, Brazil.

14 Knoxia, Linn.

1. Knoxia corymbosa, Willd.

Knoxia corymbosa, Willd. Spec. 1. p. 582;
Nicht. & Arn. Prodr. 1. p. 439.

K. exserta & K. teres, DC. Prodr. 4. p. 569.

Hab. Caldera, Mindanao, Philippine
Islands. A narrow-leaved form.

15. Emmeorhiza, Pohl.

1. Emmeorhiza Brasiliensis, Pohl.

Emmeorhiza Brasiliensis, Pohl, in Flora, 1835,
p. 183, Endl. Gen. p. 565; Benth. in Linnaea, 23. p. 461.

Endlicheria Brasiliensis, Presl, Synb. Bot.
1. p. 73, t. 49.

Borreria umbellata, Sprng. & Machonia Brasiliensis,
DC. Prodr. 4. p. 551 & p. 575, fide Benth.

Hab. Organ Mountains, Brazil.

Canthium, Lam., Benth.

If the following Cassenian species is rightly referred to Canthium by Benth. and Ather, ~~of which the~~ and there seems no reason ~~to~~ doubt ~~that~~ ~~it is~~,— then the name of Plectrovia, Burm. f. Linn., should have been adopted for the genus, being far older than that of Canthium, Lam. As this would ^{now} require great change in names, it may perhaps be avoided by laying stress upon the fact that, according to DeCandolle, N. Burmann founded the genus in part upon a Celastrus.

+ Schlecht.

1. Canthium Thunbergianum, Cham.

Plectronia ventosa, Linn. Mant. 1. p.
52; St. Prodr. 4. p. 476.

P. corymbosa N. Burm. Prodr. Fl. Cap.
p. 6? A. Rich. Mem. Rub. p. 109.

Sorissa Capensis, Thunb. Fl. Cap. p. 193;
Bruse, Rub. Cap. p. 24. t. 2.

Hab. Cape of Good Hope. (2nd fruit.)

+ Arn.

2. Canthium lucidum, Hook. &

Canthium lucidum, Hook. & Arn. Bot.
Beech. Voy. p. 65.

Coffea odorata, Host. Prodr. p. 16? St. Prodr. 4. p. ^{500.}
Myrtina umbellata, Hook. & Arn. Bot. Beech. p. 86, non St.

Hab. Orolan, Nanna-levu, and
Aru-Aru, Feeje Islands, Kaala
Mountains, Oahu, Sandwich Islands.

The leaves ^{of the Feeje plant} are not so lucid as in
the original C. lucidum; but they are
the same in structure and shape, varying
however into narrowly oblong forms, tapering
above as well as below, in the Feeje
specimens. Their lower surface, in both,

commonly bears a sort of gland in
the axil of some of the veins in the form
of a small ~~tuber~~ protuberance at length
~~with~~ hollow and with a pore-like
orifice. The corolla is parted almost
to the base into 4, 5, or, in the
plant from Gambier's Island some-
times into 6 divisions. Stigma
oblong, much thickened, ^{size of a pea,} ~~Druse of the~~
two-celled, ^{slightly} ~~somewhat~~ tubercular on
the surface. Oboles and seeds pendu-
lous.

§ Tarotea. Corolla hypocraterimorpha,
tubo limbo lobis duplo longi-
ore; antherae subsessiles mucronatae.

3. Canthium barbatum, Benth.

Canthium barbatum, Benth. in
Hook. Niger Fl. p. 410.

Chiococca barbata, Forst. Prodr. p.
16; DC. Prodr. 4. p. 483; Hook. & Arn.
Bot. Beech. p. 55. t. 14; Guill. Zeph.
Tait. p. 52.

(and Eimeo,
Nab. Tahiti) Society Islands;
common in deep woods near the coast.

Mr. Benthams has rightly referred
this plant to Canthium, from which
genus it and the preceding species
differ only in the elongated tube of
the corolla. The name by which the
section may be indicated is one of the
aboriginal names, according to Forster's
manuscript notes, published by Guille-
min, in the Zephyritis Taitensis. Forster's

detailed description and Hooker and Arnott's ~~figure~~ plate leave little to be desired. We have only to add that the anthers are oblong-ovate and mucronate, as Forster describes them, not didymous as represented in the plate above-cited. Ovule pendulous from the upper part of the small cell, semi-anatropous, the micropyle ^{over} superior. Fruit obovate-didymous, ^{over} half an inch in length and breadth. Pyrene 2, nearly half an inch long, between lunate and reniform, thick, rough, acutely 2-3-carinate on the back, osseous. Seed lunate, conformed to the cell: albumen fleshy. Embryo slender about half the length of the albumen: radicle superior. — Forster says there are four seeds in pairs; but all the specimens examined are dicarpellary and the cells uniovulate.

4. Canthium sessilifolium. Sp. Nov.

C. inerme, glabrum; foliis oblongo-ovatis seu ovato-lanceolatis basi rotundata fere sessilibus chartaceis supra lucidis; pedicellis solitariis vel 2-3 in axillis fasciculatis flore gracili (semi-pollicari) dimidio brevioribus; pedunculo communi vix ullo; limbo calycis 5-dentato; corollae lobis 5 tubo ~~floris~~ dimidio brevioribus; pyrenis seminibusque fere rectis angustis.

Nab. Nanua-levu, one of the
Fiji Islands

An evident congener of C. barb-
atum, but at once distinguished by
its much ^{lucid} ~~smaller~~ ^{and} ^{nearly} sessile leaves
with a rounded base, and the more
slender tube to the corolla. Branches
slender, unarmed, stipules subulate
from a broad base, deciduous. Leaves
from $1\frac{1}{2}$ to nearly 3 inches long, the
broader ones an inch wide, obtuse, or
obtusely subacuminate, indistinctly veined,
shining above, rather dull beneath,
perfectly glabrous, much longer than the
internodes. There is a very short spur
in the axils from which flowers proceed
which may sometimes develop at length
into a short common peduncle or rachis,
in the manner of the preceding species.
Pedicels 3 lines long, solitary or 2 or 3 in
a fascicle. Calyx teeth 5, very short, acute.
Corolla salverform; the narrow tube
~~also~~ nearly 5 lines long; throat densely
bearded; lobes 5, about 2 lines long.
Anthers exserted from the ~~throat~~ throat,

oblong, abruptly mucronate, nearly sessile. Stigma a little exserted, thick, somewhat two-lobed. Ovary two-celled, with a pendulous ovule in each cell. Drupe ^{two}obovate-didymous, 3 or 4 lines long; the pyrene and the narrowly oblong seed straight, the latter suspended from near the apex. Embryo cylindrical, almost ~~as long~~ the length of the fleshy albumen; radicle superior.*

* Another species of this subgenus occurs in Prof. Harvey's collection in the Friendly Islands; viz. —

Canthium (Tarcea) Harveyi (sp. nov.); inermis, glabrum; foliis ovato-obovatis subcoriaceis opacis subtus pallidis (2½-3½ poll. longis) apice rotundatis vel obtusis subacuminatis basi in petiolum (circ. 3 lin. longum) ang contractis; inflorescentia 6-barbati; corollae tubo lobis 5 subduplo longiore. — Navau or Lifuka, Friendly Islands, W. H. Harvey, 1855. — The C. Harveyi of Seemann's list, no. 220, from the Fiji Islands, is only C. lucidum.

Simonius, Rumph.

Char. emend. Flores polygami, nuncpe
ovario abortu sterilis et hermaphro-
diti. Calycis limbus cupuliformis,
truncatus vel obsolete dentatus, persistens.
Corolla hypocrateriformis, ~~intus~~ ^{extus} ~~sericea~~
nuda, lobis 4-10 aestivatione valvatis.
Stamina 4-10 tubo inserta; filamenta
brevisima; antherae lineares basi
sagittatae. Stylus apice 5-10-fidus,
lobis subulatis inaequalibus intus
stigmatosis. Ovarium pluriserialiter mul-
tiloculare. Ovula in loculis solitaria,
ab apice funiculo brevissimo seu strophio-
la cupulari suspensa. Fructus dru-
paceus, polysperus; pyrenis numero-
sissimis angustis circa axem elongatam
imbricatum et multiserialiter superposi-
tis, putamine apice ^(ut in Gueldardis) ~~per~~ ^{seminis} ~~sericeo~~
~~lineari-oblongum~~ strophiola obtusamente
~~instar~~ ~~cla~~ suberosi instar clauso.
Semen lineare vel oblongum; albumen
vix ullum. Embryo semini conformis,
cylindricus; ~~radicula~~ ~~super~~ cotyledonibus
~~brex~~ radícula multo brevioribus. —
Arbores vel frutices; stipulis interpetiolaribus
Colaribus

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penulatis ^{vernatione} ~~gemmarum~~ ^{max caducis} convolutis ~~de-~~
~~ciduis~~; foliis coriaceis seu crassiusculis,
venulis ^{uliginis} (pagina superiore praesertim) ten-
uissime et creberrime reticulatis; pedun-
culis axillaribus ~~uni~~ 1-3 ^{floris} vel fl. masc.
~~5-7 floris.~~ cymoso-5-mulifloris.

Timonius, Rumph. Herb. Ambon. 3.
p. 216, t. 140; R. Brown, in Herb.
Banks & Mus. ann. 1810.

Porocarpus, Gartin. Fruct. & Sem. 2, p. 473, t. 178.
Eriothalis, Forst. Prodr.; Gartin. f. Supp. p.
92, t. 196, non Linn.

Polyphragmon, Desf. in Mem. Mus. Par.
6, p. 6, t. 2; A. Rich. ⁱⁿ Herb. p. 151.

Burneya, Cham. & Schlecht. in Linnaea,
4, p. 189, excl. sp. no. 2.

Timonius (excl. sp. & char.) & Polyphragmon,
Dc. Prodr. 4, p. 445, 461.

Nohea (excl. syn. Gaudich.) & Polyphrag-
mon, Korthals, in Neder. Kruidk.
Arch. 2, p. 212, 215; Miq. Fl.
Ind. Bat. 2, p. 234, 260.

Petesia Spec. 1, 2, Barth. in Dc. Prodr. 4, p.
395.

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For information enabling me to fix
~~clear up the charac.~~ the synonymy and
assign the true characters of this genus
and Trohea, I am indebted to the
head and Nestor of our Science, Robert
Brown. He had, nearly half a century
ago, identified with Timonius of Rumphius
a plant collected by Sir Joseph Banks
at Endeavour River, and by himself on
the same coast of tropical Australia, and
in the Banksian herbarium had referred
the Eri thralis of Forster to the same genus.
The allied Sandwich Island plant was
also known to him, in fruit, at the same
early period, and suspected to be ~~probably~~ not
congeneric, ~~which~~ DeCandolleⁱⁿ adopting
the ^{name} ~~genus~~ Timonius, probably from the Bank-
sian herbarium, followed Chamisso and
Schlechtendal in referring the Sandwich
Island plant ^{with} ~~and~~ Forster's to the same genus, but took
the carpalological characters from the former.
That he had no idea of the fruit of the latter
is evident from his having referred it,
as figured by the younger Gartner, to
^{the genus} Polyphragmon, Desf., which he was not
aware is identical with Timonius of
Rumphius. Finally, Korthals undertook
which last (vide DeCandolle) ~~he also~~ ~~was~~ ~~he~~ ~~referred~~
to Exanthra.

to elucidate these plants; but he wrongly describes the internal structure of the seed, and divides genuine species of Timonius between ^{his} Bobea and Polyphragmon. In this he is followed by Miquel, who, however, ~~at a~~ a little later (Fl. Ind. Bot. 2. p. 355) ~~becomes~~ ~~are~~ perceives that the two supposed genera are, ~~much the same thing.~~ ~~Korthals~~ ~~refers~~ ~~includes~~ ~~in his Bobea~~ (very much alike.)

in the ovary! The whorls are suspended, not erect, a
"somina erecta" ~~is a phrase~~ forced into the character by Endlicher,
Simoneus Horstii has merely oblong
and pretty thick, crustaceous, and ~~somewhat~~
slightly compressed pyrenae, and a coarse,
somewhat quadrate areolation of the venlets
of the leaves. ~~Over two dozen~~
~~Two~~ ~~three~~ ~~species~~

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Our Feejean species have thin, almost
papery, and linear cylindrical pyrene,
and a fine lineate reticulation of both
surfaces of the leaf. But Timonius ac-
uminatus, R. Br., which is probably T.
Rumphi, DC. (Polyphragmon sericeum,
Desf. and Acanthus Timonensis, DC.) is in-
termediate in both respects: the ultimate
veinlets run into transverse linear meshes
within the coarser reticulations, visible on
the lower but not on the upper surface
of the leaf.

1. Timonius Forsteri, DC. (Tab.)

Timonius Forsteri, DC. Prodr. 4. p. 461;
Hort. & Arn. Bot. Beech. p. 65; Guillem.
Zeph. Jart. p. 52.

Eriothalis polygama, Forst Prodr. p. 17. (E.
obovata, in ind. p. 98. & herb.)

E. uniflora, Banks! Gart. f. Fruct. & Sem.
(suppl.) 3. p. 92. t. 196.

E. cymosa, ~~Spring, Syst. Veg. 1. p. 17~~ Forst,
ex Spring, Pugill. 1. p. 17.

Burmea Forsteri, Cham. & Schlecht. in
Linnaea. 4. p. 189.

(B. Forsteri)
Bohea Forsteri, Korthals, l. c.; Miq. Fl. Ind.

Nat. 2. p. 260.

Polyphragmon minus, ^{R. Br. l. c.} DC. Prodr. 4. p. 465.

(Carlschoff, Karaka,
 Hab. Society Islands, Vincennes,
 King's, Wilson's, and other small Oce-
 anic Islands.

Guillemin has reproduced For-
 ster's original description in the Zephy-
 ritis Taitensis. The younger Gortner's
 figure of the ~~fruit~~ fruit is not bad.
 We give some analyses to supply the
 useful details.

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Plate ~~A~~ ^B. — Limnium Forsteri. Fig. 18,
~~A pyrena~~, 19, Vertical section of the same.
 20. A seed. 21. Embryo. Various magnified.

2. Timonius sapotefolius. sp. nov. (Tab. .)

T. folius (etiam nascentibus) cum stipu-
lis majusculis ramisque glaberrimis
elliptico-oblongis utrinque acuminatis.
~~costis primariis obsoletis~~ venulis cre-
berrimis lineato-reticulatis tenuiter
^{nervoso-}striatis, areolis lineari-elongatis par-
allelis; pedunculis fructiferis Petiolum
aequantibus; pyrenis ~~numerosis~~
linearibus, putamine tenui.

Hab. Sandalwood Bay, Feejee Islands,
at an elevation of about 2000 feet.

A shrub or tree (the size not
recorded), sparingly gathered in fruiting
specimens only, and, as appears from the

figures with the withered remains of
a fertile blossom. The specimens
are completely glabrous, even to the
nascent leaves. Branchlets terete,
slender. Stipules large for this family,
apparently larger than those of *T. Kumpshii*,
an inch or more in length,
oblong-lanceolate, in texture between charta-
ceous and scarious, chestnut-colored, ^{glabrous} con-
volute in the bud, of which they form
the perianth, caducous ^{when} the leaves ex-
pand. Leaves convolute in vernation,
oblong-elliptical, with the apex abruptly
more or less acuminate, and the base
more gradually tapering, 2 to 3 1/2 inches
long (and the petiole about half an inch
in length), an inch or more in breadth,
smooth, of the same hue both sides, not
~~shining~~ lucid but of a somewhat satiny
aspect, owing to the close ~~and fine~~ parallel
^{ultimate} venlets, which are so fine as scarcely to
be discerned by the naked eye. Of
ordinary primary veins there are only
~~very~~ obscure indications, but one or even
two ^{finer} intramarginal veins are sometimes
more apparent. The whole ~~fine~~ venation,
with these exceptions the

consists, in fact, of very closely set, uniform, and exceedingly delicate nervose veinlets, proceeding side by side obliquely from the midrib to the margins, and interlacing at considerable distances, so as to ~~form~~ form narrowly linear and parallel meshes, which in the dried specimens are barely visible to the unassisted eye, but are conspicuous under a lens, especially on the upper surface of the leaf. No flowers are known except the vestiges of a withered one, which was delineated upon the plate under Mr. Nich's superintendence (Fig. 9), from which, and from his artist's sketches, the figures 10, 11, and 12 have been prepared. It appears that the limb of the calyx is extremely short and completely truncate; the corolla 5-cleft, and evidently of valvular aestivation, and the anthers linear and sagittate. The ~~remains~~ of the corolla, as appears from the remains, is glabrous externally, which is remarkable in this genus. The fructiferous ~~are~~ peduncles are simple and one-flowered, about half an inch

[Faint, illegible handwritten text, likely bleed-through from the reverse side of the page.]

long, equalling the petioles. Fruit globose, as large as a pea, crowned with the very short, truncate, and entire ~~border~~ ^{border} of the calyx. Pyrene very numerous and pluriserial, in the manner of the genus, ~~as it were~~ ^{slightly} retroversely imbricated, linear-cylindrical, ~~much thinner~~ ^{longer} and for the most part a little incurved; the putamen much thinner than that of T. Forsteri, between chartaceous and crustaceous in texture, the apex only fibro-chartaceous and pericarp closed with ~~the~~ a short corky plug, which represents the funiculus of the seed, and is of fully its diameter, its lower extremity a little hollowed and applied to the hilum. ~~The pericarp~~ ~~the seed~~ Seed cylindrical, invested by an exceedingly thin and ^{minutely} reticulated testa. Albumen none, except a mere film. Embryo cylindrical: radicle superior: cotyledons very short, ~~and~~

Plate B. Timonius papillifolius.

Fig. 8. Variation of a leaf. 9. Ovary and shrunken remains of a flower corolla. 10. Corolla and stamens displayed. 11. A stamen. 12. Style. 13. Drupe. 14. Transverse section of the same. 15. Longitudinal section of a drupe. 16. A pyrene. 17. Longitudinal section of the same. The details magnified.

3. Timonius ^{nitidus} ~~affinis~~ sp. nov. (Tab.)

T. foliis ovalibus basi subcontractis
~~pt~~ obscure penninerviis, venis sub-
 reticulatis, retibus venularum varie
 variis hinc inde contrariis; - catenum
 præcedentis.

Timonius affinis, Gray in Proceed. Amer. Acad. 4. p. 36.
Pteris nitida, Bartl. in DC. Prodr. 4. p. 395.

Tab. Sandalwood Bay, Feejee Islands.
 (In fruit only.)

This so much resembles the pre-
 ceding species that it might perhaps to
 be regarded for the present as a mere variety
 [or rather ~~it~~ at ~~may be reduced~~ to this as the earlier published].
 of it. The stipules, fruit, &c. are
 quite the same. The greater breadth of
 the leaves is of no account. But these
 want the satiny appearance, and show,
 at least on the upper surface, although
 obscurely, veins of the ordinary sort, which
 insculcate coarsely towards the margins.
 The rest of the venation consists of the same
 delicate veinlets as those of T. Sapotaefolius,
 forming similar linear meshes. ~~in~~ These
 towards the centre of the leaf are parallel
 to the main veins, i.e. obliquely transverse

to the midrib; but towards the margins, where the ~~coarser~~ main veins inter-
 osculate into coarse reticulations these
 are traversed by the fine meshes in the
 opposite direction, ~~the~~ or in various direc-
 tions in adjacent portions of the leaf,
 in the manner represented in Fig.
 The fruit is more mature and more
 abundant in these specimens ~~of this~~
 than in the preceding. The whole struc-
 ture is illustrated in the figures and
 their explanation below.

Since the above was written, and my obser-
 vations upon Timonius, H. published in the
 Proceedings of the American Academy of Arts
 and Sciences, ~~published~~ ^{were} I was led by the pecu-
 liarity of venation to suspect that Bartling's
Pterisia nitida and P. ternstroemia, from the Phil-
 ippine and ^{with "areolis radiato-striatis,"} ~~Marianne~~ ^{Islands,} ~~belonged~~ were
 species of Timonius, in which the pyrene
 had (not unnaturally) been taken for seed.

A comparison kindly made, at my request,
 by Professor Grisebach in connection with
 Professor Bartling confirms this conjecture,
 and makes it almost certain that my Timonius
affinis is Bartling's Pterisia nitida.

It is better, therefore, to revert to this specific
 name, especially since T. sapotifolius may
 also ~~have to~~ come to be included in it.

Plate Q E. Timonius nitidus.

Fig. 1. Venation of a leaf. 2. A drupe. 3.
 Transverse section of the same. 4. A longitudinal
 section of a drupe. 5. A pyrene divided lengthwise,
 to show the contained seed and its funicle. 6. The same,
 with the testa removed, to show the embryo. 7. Embryo
 detached. The details variously magnified.

Bohea, Gaudich.

Char. emend. Flores ^(an semper?) hermaphroditi.
calycis limbus cupuliformis, truncatus, vel obsolete 4-dentatus, ^{persistens} corolla ^{glabra, intus nuda} hypocrateriformis, lobis 4 valibus obtusissimis aestivatione valde imbricatis. Stamina 4 supra medium tubi inserta: filamenta brevissima; antherae lineares, paullo supra basin sagittatam affixae. Stylus ^{superne} inaequaliter 3-10-fidus, lobis filiformibus apice introrsum stigmatosis. Ovarium 3-10-loculare. Ovula in loculis solitaria, ab apice funiculo brevissimo ~~carum~~ strophioleiformi suspensa. Fructus drupaceus, 3-10-pyrenus; pyrenis parallelis. osseis, crassis; sar-

carpio tenui. Semen ^{cylindricum}, cum funiculo seu strophiole crassissima ^{dura (instar)} obturamenti) ~~instar~~ ^{um} ~~laxi~~ eodem latius, loculo ^{um} ~~laxo~~ angustum subcurvato ^{um} pyrenarum implens: albumen vix ullum. Embryo seminis conformis; radícula

longa cylindrica, cotyle duobus sub-
 complanatis brevibus. — Arbores
 Sandwicensis; stipulis interpetiol-
 aribus discretis ~~caducis~~ squa-
 maceis ~~caducis~~ ~~pedunculis~~ axil-
 aribus ~~vel~~ terminalibus? uni-pauci-
 floris. { venulis foliorum exherissime
ac tenuissime reticulatis.

Nobea, Gaudich. in Bot. Voy. Freyc.
 p. 473, t. 93, non Korthals

Nobea, A. Rich. Mem. Rub. l. c. p. 135.

Burneya Sp. no. 2. Cham. Schlecht. in
 Linnaea, 4. p. 190

Limonium, ex parte et char., Lb. Prodr. 4.
 p. 466, non Kunth.

Gaudichaud's name of Bobea is to be preferred to Burneya of Chamisso not only because the plate in the Botany of Freycinet's Voyage was earliest published, but because Burneya was founded primarily upon a genuine species of Timonius, viz. upon Forster's Erithalis. As a genus, the aestivation of the corolla (now first made out), the completely hermaphrodite blossoms (as far as known), and the comparatively few, thick, and uniseriate pyrenae amply distinguish ~~it from~~ Bobea from Timonius. The two genera would even fall into different subtribes according to the distribution of the Coffeae suggested by ~~Mr.~~ Bentham, viz. Timonius with Euppyrena, into his Vanguerieae, and Bobea into his Buehlerae. But the close coincidence of these genera in most other respects greatly overbalances the character derived from the aestivation

of the corolla, while the nearly exalbuminous embryo, ~~and~~ the plug-shaped funiculus filling the ^{upper end} ~~summit~~ of the cell, and the delicate reticulation of the veinlets of the leaves (which is discernible in Chomelia and Guettarda) undoubtedly refer them to the Guettardeae.*

* Subtr. Guettardeae. Char. emend. — Corollae lobis aestivatione imbricatis, raro valvatis. Ovarium ζ -^{tri}multiloculare: ovula in loculis solitaria suspensa. Drupa ζ -^{tri}plurilocularis vel ~~di~~^{tri}-pleiopyrena. Semina e funiculo ~~brevi~~ crasso obturamentiformi suspensa: albumen nullum vel parvum. Radicula longa, cotyledones parvi.

1. Bobea elatior, Gandich. l. c.

13. glaberrima; foliis obovatis oblongis base in petiolum sat longum attenuatis; pedunculis gracilibus 3-7-floris, flore intermedio sessili, involucris basi subcupulato

Burneya Gandichaudii, Cham. Schlecht.
in Linnaea, 4, p. 140.

Timonius Gandichaudii, St. Prodr. 4, p.
461.

Hab. Oahu, Sandwich Islands; on
the mountains behind Honolulu; where

it ^{was} ~~has been~~ collected by Menzies? and
Macrae, as well as by Chamisso and
by Gandichaud; also recently by Kemy.

A small tree, with terete branchlets,
or the younger ones more or less compressed,
glabrous. Stipules² interpetiolar, nearly
half an inch in length, pergamentaceous,
triangular-lanceolate, pointed, somewhat
convolute in the bud, early deciduous.
Leaves 2 to 4 inches long, on petioles of an
inch or less in length, obovate-oblong or
oblong, with an acute or cuneate base,
rather membranaceous, moderately feather-
veined, the venulets on the upper surface very
finely and peculiarly reticulated in the man-
ner of Timonius! The few blossoms
seen and examined are all hermaphro-
dite. Peduncles axillary, 2 or 3 inches
long, articulated ~~at~~ with the stem and
with the pedicels, 3-7-flowered; the inter-
mediate flower sessile, the lateral ones
on diverging pedicels half an inch long.
A very short and nearly entire cupulate or
saucer-shaped calyculus subtends the base
of each flower. Calyx rather cyathiform;
the free portion erect and ~~about~~ ^{nearly} as long.

as the adnate tube, truncate, ^{or} very
 obscurely 2-4-toothed. Corolla pur-
 plish, glabrous without and within,
 about half an inch in length, salver-
 form, ^{deciduous;} the tube thrice the length of
 the limb; the broadly oval and very
 obtuse lobes strongly imbricated in
 aestivation, two external and two inter-
 nal; ^{the lobes sparingly bearded outside in the young bud,} stamens nearly included, in-
 serted above the middle of the tube of the
 corolla; filaments ~~much~~ very short, nar-
 row, smooth; anthers linear, in-
 serted a little above the sagittate-cleft
 base, the apex and the basal lobes apic-
 ulate. Style grooved below, cleft
 above into 3 or 4 filiform lobes of un-
 equal length, or into two divisions which
 are again cleft, making as many lobes
 as there are cells in the ovary;
 stigmas oblong, small, introrsely ter-
 minal. Ovary 4-10-celled, or in
 one specimen examined only 3-celled; cells
 small, parallel. Ovule solitary, ana-
 trypous, ^{linear-oblong,} suspended from the summit of the
 cell upon a sort of cupulate strophiole
 which is as broad as the ovule itself.

Drupe globular, from a quarter to a
 third of an inch in diameter, crowned
 with the cupulate limb of the calyx;
 the flesh thin, the mass of the fruit
 occupied by the (3 or) 4 to 10 separate
 but compacted, parallel, oblong, very
 thick-walled, and bony pyrenae: these
^{obtusely 4-5-angled by minute processes,}
 are ^{nearly} straight, in a single verticil, or
 when numerous a few ~~are~~ become exter-
^{rally; two of them are complicate into one of two cells.}
 nally; their cavity is small compared
 with the thickness of the bony wall,
 a little curved, the concavity towards the
 axis, ^{and} larger at the upper end, which is
 filled by what assumed in the ovary to
 the strophiole or funiculus, which now
 forms a firm, ^{almost} crustaceous plug, a
^{little} broader than the seed itself. Testa
 very thin and delicate, reticulated. Albumen
 only a ~~delicate~~ thin film or lining to
 the coat of the seed. Embryo ~~conform~~
 cylindrical: radicle elongated, superior:
 cotyledons ^{short,} oval, ~~flattened~~ a little flattened, ^{scarcely}
 by at all broader than the radicle.

2. Bohea brevipes, Sp. Nov.

B. foliis oblongis vel subovatis basi obtusis breviter petiolatis, junioribus praesertim ramisque hirsutopubescentibus; pedunculis brevibus unifloris?

Hab. Oahu, on the mountains behind Honolulu.

Only a single and incomplete specimen, with a solitary fruit, occurs in the collection; but, if I mistake not, it was also gathered by Gandichand in the cruise of the Bonite. There can hardly be any mistake about the genus. The only question is whether it may not be a mere variety of B. elatior. But, besides the hirsute pubescence which clothes the younger branches and foliage, and persists on the midrib and the veins of the lower surface, ~~of the~~ the petioles ~~decide~~ much shorter, only 2 or at most 3 lines long, the leaves are rather ovate-oblong than obovate, and obtuse

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or abrupt at the base. They are 2 or 3 inches in length, and one inch or an inch and a half in width, soon glabrous above. Like the original species they fall off readily in the dried state, and they exhibit the same fine reticulation of the veinlets. Stipules 3 lines long, ovate, chestnut-colored, hairy on the thickened midrib, somewhat ciliate, early deciduous. Flowers unknown. The single drupe was borne in ~~the~~^a fork of the stem, on a simple peduncle only 3 lines in length, ~~which was articulated both with and~~ articulated with it; it is globose, 3 lines in diameter, ~~capped~~^{and capsulate} apiculate with a very small, truncate limb of the calyx. Sarcocarp very thin. Pyrene 4, thick and bony, as in *B. elatior*; the structure of the seed not made out.

~~*Protea*~~
~~To this genus I am constrained to~~
~~append~~

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Chomelia, Jacq.

1. Chomelia? Sandwicensis, ^{Mv.} sp.)

C.? ramis junioribus pubescentibus;
foliis glaberrimis oblongo-ova-
tis acuminatis basi rotundatis;
fructu dipyrreno globoso caly-
cis lobis ~~ma~~jusculis ovalibus
obtusissimis recurvis coronato.

Hab. Kaala Mountains, Oahu,
Sandwich Islands.

Shrub or tree with the branch-
lets scarred all over with the contig-
uous cicatrices of fallen leaves and
stipules, when young pubescent or
hirsute, at length glabrous. Stipules
interpeticular, small, ovate, thickish,
hairy ~~not~~ outside, caducous. Leaves

much crowded at the end of the branchlets, perfectly glabrous, even ~~when~~ in their nascent state, ovate or oblong-ovate, gradually tapering above into an acute acumination, $1\frac{1}{2}$ to 2 inches long, ~~for~~ 9 to 12 lines wide, broadest towards the rounded base, somewhat coriaceous, bright green on both sides; the veins not prominent; the veinlets, especially on the upper face, forming minute and elegant transverse reticulations in the manner of Bobea and other Guettardeae. Petioles 2 to 4 lines long. Peduncles axillary, a little longer than the petioles, few-flowered. Limb of the ^{campanulate} calyx (about the length of the turbinate ovary, deeply 4-cleft; the lobes oval or obovate, very obtuse, increasing with the fruit and becoming foliaceous and recurved and about one third ^{or a quarter} of its length, glabrous. A young flower bud exhibited a 4-lobed corolla still enclosed in the open calyx;

the lobes with a hairy ^{corniculate} ~~crenulate~~ ~~appendage~~
 dorsal appendage, within which they
 are crenulate, glabrous, and intricately
 overlapping, two being exterior.
 Anthers ~~linear~~ oblong-linear on
 short filaments. Style glabrous, 2-
 cleft at the ^{level} summit. Drupe globose,
 $2\frac{1}{2}$ lines in diameter, a little hairy
 when young, with a very thin sar-
 cocarp surrounding two thick and
 bony separable pyrenae, like those
 of *Bohea*. Seed ^{cylindrical} suspended from
 the summit of each ~~cell~~, narrow and
 nearly straight cell by a plug-
 like corky-crystaceous funiculus.
 Radicle cylindrical, occupying nearly
 the whole bulk of the seed, surround-
 ed by a thin layer of albumen.
 The lower extremity bearing a pair
 of very minute ^{and} thin cotyledons.

The developed flowers of this
 plant are unknown. The above
 characters have been drawn from one
 or two ~~young~~ very young flower-buds
 and fruits. When better known it
 may prove to be a new generic type

13. *Helio crato-olungio*

2. *Neelke Neutens*

of the Guettardea. But it is more likely to fall into Chornelia or into Bentham's genus Guettardella which is hardly well ~~enough~~ ^{greater} distinguished by the ^{number} of ovarian cells. Chornelia vihesioides, Bentham, occasionally exhibits a 4-celled prutamen; and the ~~four~~ pyrene of Guettardella chinensis are very often consolidated into a 4-celled prutamen in the specimens collected by Mr. Charles Wright.

Guettarida, Linn.

1. Guettarida (badamba) speciosa, Linn.

^{Scrubby and}
 Hab. Tongatabu. } ^{Cultivated,} Feejee Islands,
King's Island, Mangsi Islands.

Miquel (Fl. Ind. Bat. 2. p. 261),
 while characterizing his tribe Guettarideae,
 upon indications supplied by Benthams,
 by its solitary pendulous ovules, still re-
 tains the phrase "semina erecta" in the
 generic character, ^{with a mark of doubt,} The ovules are truly
 suspended from the summit of the cell,
 both in this and other species of Guet-
tarda, ^{by a} ~~and the~~ cupulate funiculus, ^{which} becomes
 in fruit a crustaceous plug; ~~this~~ ^{the} nature
 of ~~which~~ ^{this body} was rightly understood by Richard.
 The tapering of the ovules and forming seed
 to an acute apex at the base of the
 cell may have misled those authors
 who describe the seed as erect. As to
 the embryo, that of G. speciosa was better
 understood by Gartner than by Richard.
 It consists, in fact, of a macropodous radicle,

which, with the obscurely-marked cotyledons at the tapering lower end, and fills the seed; ~~surrounded merely~~ enclosed what intervenes between it and the delicate testa is ~~rather~~ apparently tegmen rather than a film of albumen. There is only a thicker film of this sort in the species ^{from Key West} named G. elliptica in the Flora of North America, the only other species which I possess fruit of. Here the embryo is similar; and the cotyledons, although difficult to separate in the mature seed, are plainly discernible ~~a little earlier~~ in scarcely ripe ones: they are very short, oval, plano-convex, and of no greater diameter than the ~~tapering~~ radicle at that end.

2. Guetlunda rugosa, Swartz.

Stat. Brazil, in the Organ Mountains near Rio Janeiro.

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B. Guettarda? Vitiensis, Sp. Nov.

G.? foliis ovato-oblongis acuminatis
membranaceis supra fere glabris
subtus ramulisque appresse puber-
ulis; pedunculis petiolum subequan-
tibus 3-7-floris; drupa ovali calyce
~~dentibus~~ obtusissime 4-⁵-dentato
coronata 3-⁽⁻¹⁰⁾7-loculari, loculis rec-
tis.

Hab. Ovalau and Muthuata,
Feejee Islands.

The specimens belong apparently
to a good-sized shrub or small
tree, with deciduous silky and subulate
deciduous stipules, and thin, oblong
or ~~ovate~~ ovate-oblong and acuminate
leaves, of 2 or 3 inches in length, rather
prominently feather-veined, nearly glabrous
above, but ~~when~~ minutely pubescent with
fine appressed hairs underneath, as are
the branches, the older ones glabrate.
Petioles slender, half an inch long. No
blossoms remain; but one or more must have

been known to Mr. Rich, who, in a ~~note~~ memorandum attached to the specimens, remarks that the "corolla is tubular, binate externally, and on the reflexed lobes of the limb, also hairy inside, particularly near the base; filaments short, inserted near the middle of the tube; ovary 3-10-celled; style thickened, furrowed; stigmas 10? linear." ~~The~~ A short and thick style, or its base, remains upon some of the young fruits, and is blunt at the extremity. If the stigmas are really linear, the plant ~~should~~ is can hardly be a Guetta arda. But the ovules and fruit ~~are~~ accord with that genus, to which our plant may as well be referred until the destination of the corolla is known. Should it prove to be valvate, as the ~~hairiness~~ ~~the~~ plant can hardly belong to Korthals' genus Lachnastoma, for the ^{linear} ovules ^{and linear seeds} are suspended from the very apex of the (usually 4 to 7) cells, ~~and the~~ they have a well-marked cupulate funiculus or strophiole, in the manner of Guetta arda. The short limb of the calyx is truncate and very obtusely 4-5-toothed. Drupe not larger than a pea, oval, more or less

angled in the dried state, with a thin sarcocarp and a somewhat angled, bony putamen, having from 3 to 7 narrow and straight cells.

This plant should be compared with the Guetta ardella from the Philippine Islands spoken of by Mr. Benthham in Flora Hongkongensis, p. 158. For its resemblance to G. chinensis is great to G. chinensis;—in which, moreover, the pyrene, though sometimes separate, as described, are (in C. Wright's copious specimens) for more commonly converted into a 4-5-locular putamen, so that the ^{Guetta ardella} genus, I suppose, will not stand. See V. Seemann's no. 257, from the Feejee Islands, with only very young flower-buds, is perhaps the G. Vitiensis or very near it.

Scyphiosphora, Gærtner.

1. Scyphiosphora hydrophyllacea, ^{Gærtner} ~~1~~

Scyphiosphora hydrophyllacea, Gærtner.

f. Carp. 3, p. 91, t. 196; Blume
Bijdr. p. 95; DC. Prodr. 4
p. 557; ^{Jack. Bot. p. 29, t. 4;} Korth. in Neder.
Kruid. Arch. 2, p. 203; Hassk.
Retz. 1, p. 16; Miq. Fl. Ind.
Bat. 2, p. 239.

Epithymia Malayana, Jack in
Malay. Misc. 1, p. 12, t. Work.
Bot. Misc. 2, p. 67; DC. l.c. p.
477; Night & Arn. Fl. Ind.
p. 423.

Hab. Small islands in the
Andaman Sea: a maritime shrub.

Korthals has rightly identi-
fied Jack's Epithymia with the
little known Scyphiosphora of the
younger Gærtner and of Richard.
But I still find something to cor-
rect in the attempts made to com-
plete Jack's description. This ap-
pears to be perfectly correct, as far as
it goes, except as to the absence of
stipules. I do not find the up-
per ovule "pendulous from the apex
of the cell", as stated by Night and
Arnott; nor are the ovules solitary
in each cell, as ⁱⁿ Hasskarl's recent
description; nor is the upper ovule
prematurely abortive, as Miguel
would have it. The two cells of
the ovary are ~~long~~, pretty long and
narrow, and each contains two
^{Anatropous} ovules, on funiculi of nearly their
own length, which are inserted
in the ^{middle} ~~dissepiment~~ at the middle
of the cell. The upper ovule is
erect; the lower pendulous.
The funiculi are thickened at
their extremity, so as to cap the end
of the ovule as in Guttardaceae
generally, but not perhaps so con-
spicuously. In the fruit, when both
ovules have been fertilized, the
cell becomes constricted in the mid-
dle between the two seeds, ~~for this~~
producing two imperfect locelli, one
above the other; these locelli, and the
seed which is conformed to the cavi-
ty, are somewhat curved. In the
~~scarcely~~ hardly mature seeds examined
the embryo has oblong ^{and} flattish coty-
ledons, which are larger than the
radicle; and the albumen is nearly
wanting. The corky-crustaceous pericarp,
surrounded by a thin epicarp, does not incline
to split readily into two pyrenes. The corolla
is convolute or contorted in aestivation. It
would seem that the genus may be appended
to the Guttardaceae. (and sometimes pantaneros.)

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Chiococca, P. Browne.

1. Chiococca densifolia, Mart.

Chiococca densifolia, Mart. Spec. Veg.
Mat. Med. Bras. p. 17, t. 6; St.endr.
4, p. 482.

Hab. Brazil, near Rio Janeiro, and
in the Andean Mountains. Rio Negro,
North Patagonia.

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Ixora, Linna.

To unite Ixora and Parvetta, as ^(Richard) Blume and Miquel have done, seems not unnatural. But in that case the former, instead of the latter name ~~should have~~ should be retained, not only because the name Ixora had been preferred by ~~Samuel~~ Lamarck, but because it is, as a Linnean genus, ten years older than Parvetta, appearing as it does in the first edition of the Genera Plantarum.

Miquel wrongly characterises the group (his tribe Parvetteae, the subtribe Ixoreae of Benthams) as having the lobes of the corolla imbricated in aestivation; whereas they are most obviously and as far as noted constantly convolute, as Benthams has stated in the Riger Flora, ~~where~~ explaining that he uses the term 'imbricate' in a general sense ^{for} ~~to cover~~ any overlapping forms that may occur, in contra distinction to ~~those~~ the valvate aestivation.

* Oceanica et Asiatica.

1. Ixora stricta, Roxb.

Hab. Philippine Islands, at Caldera, S., and Mangsi Islands. The ~~latter~~ specimen from the latter station (in fruit only) may belong to Lindley's Ixora crocata, which, however, is probably only a form of I. stricta. [~~From~~ From Sandal Wood Bay, Feejee Islands, is a fragment, destitute of flowers, which may belong to this species. ~~Still another species with large petioled leaves was gathered at the Feejee Island by Dr. Harvey, but out of flower.~~

2. Ixora pendula, Jack.

Hab. Mountains near Bairos, Luzon, small island in the Soolow Sea.

3. Ixora concinna, ^(N. Br. in) Wall. Cat.

Hab. Singapore. (Flowers undeveloped.)

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4. Ixora parviflora, Vahl.

Hab. In the vicinity of Manila,
Luzon.

5. Ixora (Phyllilema) Samöensis, Sp. Nov.

I. glaberrima; foliis ovalibus utrinque
obtusis vel obtusiusculis, floralibus
etiam petiolatis ovatis, capitulum
triflorum fulcrantibus; dentibus caly-
cis ^{with a ~~very~~ glabra} subulatis; stipulis longissime aristato-
subulatis.

Hab. Upolu, ^(one of the) ~~and other of the~~
Samöan Islands.

Apparently a much-branched shrub
or tree, glabrous throughout, even to the
branchlets and nascent leaves. Stipules
early deciduous, ^{from a} triangular ~~subulate~~ base
tapering into a subulate awn of ~~4~~
about 4 lines in length. Leaves of a
rather chartaceous texture, smooth and
of ^{nearly} ~~about~~ the same size both sides,
reticulate-veiny, 2 to 4 inches long, ^{and} ~~from~~

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one to $2\frac{1}{2}$ wide, oval, mostly obtuse
or with an obscure and blunt acumi-
nation at the apex, the base abruptly
contracted into a petiole of 2 to 4 lines
in length. The floral or bracteal
leaves are more like the ordinary
leaves in this species than in the fol-
lowing, being only the uppermost pair
of smaller size, an inch or an inch
and a half in length, inclined to ovate
in outline, and ~~more~~ rather acute at
both ends, the base ~~scarcely~~ contracted
into a short but distinct petiole. This
pair of leaves immediately subtends a
sessile cluster of three nearly sessile flowers.
It is occasionally proliiferous, ~~an internode~~
~~developed from either axil~~ (from one or
both axils. ^{the color not recorded.}) Teeth of
the calyx 4 or 5, ~~elongated~~ subulate, about
the length of the undivided free part of the
limb. Corolla salver-shaped; the slender tube
nearly an inch long, ^{only 4 in the specimens examined} peaked and glabrous
within; the lobes ^{convolute in aestivation}, ovate-lanceolate, tapering to an acute
point. Stamens inserted in the throat of
the corolla: filaments very short; anthers
lanceolate, fixed by the base, adnate-

~~acute or~~
introrse, ~~somewhat~~ apiculate-acute.
Ovary 2-celled, with a pellate ovule
in each cell. Style filiform, glabrous;
^{above, hairy below;} stigmas linear-oblong, thick, ~~in~~ connivent,
or somewhat concreted below, exerted
from the tube of the corolla, ~~short~~ not
equalling its lobes. Drupe, the size
of a small pea, dipyrrenous; the
pyrenae thin, crustaceous, ~~flat~~
hemispherical, flat on the inner
face, ^{smooth and even in the back,} seed pellate, deeply excavated
at the hilum.

This and the two following species,
with *I. fragrans* (*Cephaelis? fragrans*,
Hook. & Arn. Bot. Beech. p. 14, t. 13) appear
to constitute a well-marked section of
Ixora, ~~but are not generically distinguished~~
on account of their bracteate leaves
forming ^{a diphyllous} ~~an~~ involucre to a cluster
of three or more sessile flowers. The
present species, ~~smaller~~ having these leaves
very similar to the rest of the foliage, ~~is~~
differs least from *Ixora* proper, and
could not be generically separated from
it. Our specimens are not in good
condition. But there is sufficient to show that

they belong neither to Storker and Arnott's Cephaelis fragrans, nor to Forster's Psychotria speciosa. The petiolate involucral leaves, ~~and~~ the long-armed stipules, and the glabrous style distinguish it from the former, as that is figured in the Botany of Buchey's Voyage; and the same marks, as well as the smoothness of the corolla inside distinguish it from Forster's still imperfectly known plant.

Storker and Arnott were in doubt whether their plant were not the same as Forster's Guillemin, who had Forster's plant to compare with the figure of the former, remarks, that, besides the difference in the leaves, which is unimportant, the flowers of Forster's plant are pentamerous, while those of C. fragrans are tetramerous. In this he overlooks the fact, that, although the flowers are described ~~in~~ the letterpress as tetramerous, ~~they~~ are all represented as pentamerous on the plate. They probably vary in this respect. In our three species the ^{minute} teeth of the calyx are generally five, while the lobes of the corolla and the stamens are only four. Better distinctions appear in ~~the~~ comparing

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The description and figure of *J. fragrans* with ~~the~~ Forster's account of his plant, as printed in the *Zephyritis Taitensis*. The bracts of the latter are said to be an inch long, transversely rugose, and deciduous; ~~those of the former 6 or 8 lines long,~~ the flowers white and two inches long; the lobes of the corolla villous within and ~~at the~~ throat villous; as also the style; the lobes of the stigma spreading; and moreover the seeds, or rather pyrenae, are said to excavate-channelled or bisulcate on the outside, which is hardly congruous with the present genus. *J. fragrans* is said to have ~~red flowers,~~ a red corolla, and it is figured as glabrous ^{within}, and less than an inch long; the bracts only 6 or 8 lines long, the style only a little glandular &c. Neither of these plants were ~~seen~~ ^{for} met with at the Society Islands by the American expedition.

Sp. Nov.

b. Ixora (Phylliema) Vitiensis.

I. glaberrima; foliis ovato-oblongis
acuminatis basi rotundatis,
floralibus seu bracteis late cordatis
arcte sessilibus capitulum triflorum
fulcrantibus; dentibus calycis brevis-
^{corolla glabra}simis; stipulis longissime arista-
tis.

Var. β^3 foliis oblongis ~~utrinque angus-~~
~~tatis~~ in petiolum attenuatis.

Hab. Ovalau, Feejee Islands.

A shrub? with slender branches,
glabrous throughout. Leaves thin, 2 to 4
inches long, oblong or ovate-oblong, mostly
acuminate, rounded at the base; the short
but distinct petioles only one or two lines
long. Stipules as in the preceding
species, but more slenderly aristate. In-
volucral leaves decidedly different from the
ordinary foliage, not more than an inch
^{or nearly a half} long, very broadly cordate, closely sessile,
acute; inflorescence sometimes proli-
ferous

from the axils of these involueral leaves.
Flowers 3, sessile in the involuere,
glabrous throughout. Calyx-teeth 4 or
5, extremely short, subulate. Corolla, 4,
as in ^{nearby} *Samoensis*, ^{but the 4 lobes broader and 'less acute'} the slender tube
fully an inch long, ^{very acute. style hairy below.} glabrous within.
Lobes of the stigma at length spreading.
~~Style glabrous.~~ Drupe the size of a
pea, dipyrrenous: pyrene chartaceo-
crustaceous ^{melancholy} hemispherical, with a deep
orbicular excavation ^{smooth and even on the back,} at the middle of
the inner face, seed conformed to the
cell, peltate with a large central
hilum. Embryo nearly the length
of the fleshy ~~albumen~~ (not corneous)
albumen, incurved: the radicle
^{inferior,} ~~nearly~~ twice the length of the broad,
reniform, menisoidal cotyledons.

A fruiting specimen, also from
the Feejee Islands, the station not
recorded, here indicated as a variety,
is remarkable for its oblong leaves, of
a rather thicker ~~texture~~ and firmer
texture, tapering to both ends, the base
narrowing gradually into a petiole which
is sometimes 3 or 4 times long. ~~In other~~
~~respects~~ Additional materials of this are
a desideratum.

7. Ixora (Phylleilema) amplifolia, sp. nov.

f. foliis ^{elongato-}oblongis subacuminatis basi
obtusissimis ~~sen~~ leviter subcordatis
glabris, floralibus ~~sen~~ bracteis
ovalibus arcte sessilibus capitulum
pluriflorum pulcrantibus; dentibus
calycis brevissimis; corolla cum
ovario extus pubera; stipulis
brevis subulato-aristatis.

Hab. (^{Upolu and} Savai?) Samuan Islands.

Branchlets compressed, glabrous.
Leaves when young slightly pubescent,
soon glabrous, lucid above, rather mem-
branaceous, 5 to 9 inches long and from 2 to
3½ wide, on distinct petioles of only 2 or 3
lines in length, elongated-oblong or obo-
vate-oblong, ~~and~~ mostly with a short and
rather obtuse acumination, the base
commonly retuse or subcordate with a narrow
sinus. Stipules tapering from a broadish
base into subulate or short-awned tip,
caducous. Inflorescence as in the preceding.

but the capituli ^{often} ~~generally~~ in threes at
the summit of the branches, very short-pe-
duncled, ~~and~~ each with from 9 to 15
flowers on very short and thick pedicels.
Involucre of a pair of oval or ren-
dish-oval thin leaves, which are
closely sessile, developed with the flower-
buds, and expanded before these are full-
grown, one or two inches long, obtuse at
both ends, not cordate, ~~and~~ early decidu-
ous. The club-shaped ovaries and their
pedicels pubescent with ~~soft~~ and short
hairs, as is the whole exterior surface of
the corolla, even when old. Teeth of the
calyx ^{truncate,} minute, 4 or 5. Tube of the corolla
an inch in length; the lobes 4, ovate-
lanceolate, acute, 3 or 4 ^{the throat, or glottis,} lines long. Anthers
sagittate, apiculate. Style slightly
hairy below the middle: lobes of the stig-
ma, thick, oblong, obtuse, connivent.
Drupe and seed nearly as in the last
species.

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* * Americana

8. Ixora eriantha, Sp. Nov.

I. stipulis aristato-subulatis; foliis ovalibus ovatisque ~~subsessile~~ oblique sub-acuminatis subsessilibus basi rotundatis vel subcordatis ramisque glabris; cyma parva terminali floribusque subsessilibus; corolla extus cum calyce pubescente, lobis ovato-lanceolatis acutis tubo uno gracillimo triplo brevioribus.

Hab. Brazil, near Rio Janeiro.

Imperfect as the specimen is, it clearly belongs to a true Ixora, allied to I. Bahiensis, I. Schomburgkiana, &c. of Benth. Branches terete, glabrous. Stipules 3 lines long, subulate-aristate from a broad base. Leaves glabrous, $3\frac{1}{2}$ to 6 inches long, 2 or 3 inches wide, oval, oblong, oval, or the uppermost ovate obtusely more or less acuminate, rounded or slightly cordate at the base, almost sessile, ~~char-~~ rather membranaceous. Cymuli about 5-

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flowered, pubescent, ~~at the sum~~ terminal
and in the axils of the uppermost
leaves. Flowers very short-pedicelled.
Calyx 4-5-toothed, densely pubescent.
Corolla with a slender tube 9 or 10
lines in length, softly pubescent out-
side, except perhaps the lower part
of the tube, which is sometimes gla-
brate; the lobes convolute in aestivation,
ovate-lanceolate, acute, Ovary and
fruit of the genus.

Pavetta, Linu.

1. Pavetta Indica, Linu.

Hab. Near Manilla, Philippine Islands.
(Apparently the same species was gathered at the
Freeze Islands and New Hebrides by Milne.)

2. Pavetta weberaefolia, R. Br.

Pavetta weberaefolia, R. Br. in Wall. Cat.
no. 6182; Don, Syst. Pl. 3. p. 575.
P. cerberaefolia (sphalmate), Miq. Fl. Ind. Bat. 2. p. 279.

Hab. Mangsi Islands.

(5 to 9 inches long, elongated-oblong.)

Leaves large, bright green and glabrous
on both sides, lucid, ~~feathered~~ with 9 to 11
pairs of primary veins; venulets reticulated.
Petioles an inch or less in length, byme
rather large. Limb of the calyx trunc-
ate, corolla apparently greenish or white,
villous-tomentose in the throat; the lobes often
6 or 7 in number, oblong-linear, very obtuse,
nearly the length of the tube, half the
length of the exserted clavate-thickened style.

— This is likely to be some species described
by the Dutch botanists; but I do not identify it
with any of them.

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3. Pavetta paludosa, Blume.

Pavetta paludosa, Blume, Bijdr. p. 954;
Dc. Prodr. 4, p. 491; Miq. Fl. Ind. Bat. 2, p.
271, ex char.

Stat. Small island in the Sooloo
Sea, (in fruit.)

Morinda, Naill., Lin.

Morinda, Tribrachya? & Rennellia,
Korthals in Arch. Kruidk. Arch.
2, p. 257; Miq. Fl. Ind. Bat. 2,
p. 242, 248.

Sphaerophora, Blume, Mus. Bot.
Lugd. 1, p. 174, t. 36.

In the Niger Flora, Mr. Bentham
proposed to include the Morindeae of
DeCandolle in his subtribe Nanguerieae,
characterized by a valvate aestivation of
the corolla and pendulous ovules. Mi-
quel has followed this indication in
his Flora of Atch the Dutch East Indies,
(although retaining Morindeae as a tribe)
and introduced the phrase "ovulis pendu-
lis" into the character of Morinda; ~~atth~~
but this has not prevented him from
~~even~~ referring to it Blume's genus
Sphaerophora, rightly enough, although
that is figured with anatroous ovules
ascending from the base of the cell. How
Mr. Bentham was led into the error, and

and why Miguel did not detect and correct it, is not clear. Certain it is that the micropyle of the ovule and the radicle are inferior in all the species I have been able to examine, both of Eumorinda and Padavara. In some, as in M. citrifolia, ~~for~~ the type of the first section, and M. mollis of the second, the ovule is fixed near the middle, in others, nearer the micropyle, in a few so close to it that the ovule is truly anatropous and ascending; invalidating, as might be expected the main characters of Korthals' genera Tribrachya and Kennellia, all the more so that the original species of Morinda have "ovula appressa".

Morindeae ~~should~~ accordingly, should either form a subtribe of the Coffeae, or be referred to the Ixoreae.

1. Morinda citrifolia. Lin.

Hab. Society Islands. Samoan Islands, and in most of the small Pacific Islands visited, such as Disappointment, Wilson's, Gardner's and King's Islands. Dr. Seemann also collected it at the Heise Islands.

3. Morinda umbellata, Linn.

Morinda umbellata, Linn. (Excl. Syn. Kumpfh.); Wight. & Arn. Prodr. 1. p. 420; Miq. Fl. Ind. Bat. 2. p. 244. M. scandens, Roxb. Fl. Ind. ~~ed. Wall.~~ 1. p. 548; DC. Prodr. 4. p. 449. M. Padavara, Juss. (Padavara, Rheede, Hort. Malab. 7. t. 27.) M. tetrandra, Jack, Malay. Misc. 2. p. 13, & Hook. Bot. Misc. 2. p. 67 (~~ad~~ licet corolla tubo nec laciniis intus barbato). M. microcephala, Benth. in DC. Prodr. 4. p. 449?

Hab. Singapore, Luzon, in the mountains near Manila, Ovolau, B. Feejee Islands, Tahiti and Eimeo, Society Islands.

~~This~~ view of the great variability of M. umbellata our Oceanic specimens may fairly be referred to this species. The most doubtful ^{are} those ~~plants~~ of the Society Islands (M. um-

bellata of Forster, which Dr. Pickering records as a shrub, with no mention of its being sarmentose; (neither does Jack ^{so describe} his M. tetrandra). The corolla is sometimes pentamerous, and the villous beard of the inside of its limb, which abounds in most flowers, appears to be wanting in some few of them.

The specimens from the Fieyre Islands are the same as those of Seemann no. 222.

3. *Morinda myrtifolia*, sp. nov.

M. (S. Padavara) *glaberrima*; ramis
gracilibus scandentibus; stipulis
in vaginam truncatam brevem con-
natis; foliis sublonge petiolatis sub-
coriaceis nitidulis lanceolato-
sen elliptico-oblongis ~~atrinque~~ ^{unice} obtusis
~~et~~ obtuse acuminatis, venis primari-
is haud conspicuis, axillis nudis;
permentis terminalibus brevibus
solitariis 2-4 nris; capitulis
plurifloris globosis; tubo corollae
4-fido intus villosa-barbato.

Hab. Muthuata and Ovalau, Feeje
Islands.

A slender and very smooth, scan-
dent species, with ^{very} short stipules com-
pletely united into a truncate sheath,
and small nearly coriaceous leaves.
These are from one and a half to two
inches long, on petioles of 4 to 6 lines in
length, very smooth both sides and with
immersed veins, destitute of glands or
beard in their axils; ^{in shape they are} narrowly elliptical

and rather obtuse at both ends, or on
vigorous shoots inclining to ovate-lan-
ceolate and obtusely pointed. Peduncles
3 to 5 lines long, often solitary or in
pairs, occasionally four in a terminal
umbel. Flowers ~~small~~ small, nearly
as in *M. umbellata*, 12 or more in the
capitulum. The syncarpous fruit glob-
ular, about 4 lines in diameter. ¹¹
~~When fuller materials are obtained this~~
~~may possibly take in the Tahiti Forster's~~
~~*M. umbellata* of Tahiti.~~

Pyrone 4, subreniform, seed conformed
to the cell, fixed rather below the middle.
Radicl inferior.

No. 223 of Seemann's Feejee col-
lection and specimens collected by Dr.
Harvey at Navaro or Lifuka
are larger-leaved forms of *M. myr-
tifolia*, approaching the Tahitian
M. umbellata, of which species it may
prove to be a variety.

4. Morinda lucida. Sp. Nov.

M. (Padavara?) glabra, scandens; stip-
 ulis in vaginam brevem connatis,
~~utrinque + 2 mucronat un~~ sum-
 mis utrinque uni-bicuspidatis; foliis
 ovatis et oblongo-lanceolatis acuminatis
 chartaceis supra lucidis, venulis
 reticulatis subtus opacis venis pri-
 maris tantum perspicuis in
 axillis saepius barbellatis; pedun-
 culis ~~terminalibus~~ (fructiferis) solita-
 riis, ternisve ~~terminalibus~~ ^{capitulis plurifloris; syncarpio}
 los ^{ad} frequentibus; ~~fructu~~ globose
 pollicari.

Hab. Orolan, Feejee Islands;
 in woods, about 1200 feet above
 the level of the sea.

This is said to be a vine, with
 the smooth leaves bright green and
 shining above. They are 4 or 5 inches
 long, and $1\frac{1}{2}$ to 2 inches wide, on
 petioles 6 or 8 lines in length. They are
 of a chartaceous or somewhat coriaceous

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texture, very smooth, but with minute traces of pubescence underneath, obtuse or rounded at the base, and tapering gradually from below the middle to a more or less acuminate apex. The primary veins 3 to 5 on each side of the midrib are very slender and slightly salient beneath, the veinlets not at all so. The "glands" in their axils are nearly as in *M. umbellata*, but their margin much less bearded. ^{Stipules at length deciduous.} Flowers unknown. The syncarp or general fruit is globose, torose-angled, fully an inch in diameter, and composed of the connate ^{drupes} ~~ovaries~~ of 15 to 20 flowers, each tetraspermous. Seeds ascending from near the base of the cell, ~~fix~~ inserted by a very narrow hilum. Radicle inferior.

5, Morinda mollis, Sp. Nov.

M. (s. Padavara) scandens, undique
velutino-pubescent; foliis membra-
naceis ovato-sen obovato-oblongis
caudato-acuminatis basi sinu par-
vo subcordatis perspicue penni-
nerviis; pedunculis plurimis in um-
bella terminali; capitulis plurifloris;
syncarpio globoso pubescente.

Hab. Feejee Islands; "common;
collected for various economical purposes".

"A vine", with slender obtusely
quadrangular branchlets which, with
the foliage, peduncles, and fruit, are
velvety ~~pubescent~~ with a soft pubes-
cence throughout. Leaves thin and
membranaceous, oblong-ovate or
oblong-obovate with a small cordate
sinus at the base, or the uppermost
lanceolate, the apex abruptly contracted
into a slender acumination; the pri-
mary veins ^{rather} ~~pretty~~ prominent underneath,
and straight, 9 to 13 pairs; the leaves are
from 3 to 5 inches long and from one

to $2\frac{1}{2}$ wide: Petioles 4 to 6 lines long,
Stipules apparently almost distinct,
early deciduous. Peduncles 5 to 7 in a
terminal umbel, about half an inch
long. Flowers not seen, having all
fallen. Ovaries about 10, ^{completely} united into
a globular head, each 4-celled and
one-ovuled: ovule semianatropous, the
micropyle inferior. The nearly full-
grown syncarp is still pubescent, glob-
ular, and barely half an inch in
diameter.

6. Morinda bucidæfolia, sp. nov.

M. (S Padavara) glabra, scandens; ramis gracilibus; stipulis subdistinctis; foliis obovato-cuneatis obtusis vel retusis coriaceis supra nitidulis subtus ^{venulis} inter costas rectas prominulas crebre reticulatis; pedunculis plurimis terminalibus; capitulo globoso 7-10-floro.

Hab. Sandalwood Bay, Feejee Islands. (In fruit.)

A climbing species, with rather slender branches, glabrous, or the peduncles &c. somewhat puberulent. ~~Stipules~~ Stipules short, apparently intrafoliaceae and the two united only at the base, but they are mostly imperfect or fallen, and their character not readily to be made out. Leaves coriaceous, smooth, crowded on the flowering branches, about 2 inches long and an inch wide, obovate-cuneate, ~~contra~~ tapering into a petiole

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of only 2 or 3 lines in length, rather
lucid, especially the upper surface,
the lower with ^{the} about 5 pairs of
primary veins or ribs rather promi-
nent but slender, ^{and} the intermediate
veinlets all nearly equal, closely
and rather ~~conspicuously~~ beautifully
reticulated, forming a rather con-
spicuous network. Peduncles 7 to
10, in a terminal umbel, 3 or 4
lines long. Flowers not seen.
Capitula about 10-flowered, in fruit
but immature about 4 lines in diam-
eter. Ovules and seed nearly anatropous,
ascending from near the base
of the cell.

I have not seen the plant of the
Fueje Islands referred by Dr. Seemann
to *M. phyllinoides*, Labill.; ^{the latter} an upright
species shrub, with axillary and solitary
subsessile heads.

Myrmecodia, Jack.

1. Myrmecodia imberbis, sp. nov. (Tab. .)

M. imberbis; foliis lanceolato-
ulato-oblongis; corolla tubulosa
calyce cum ovario ^{multoties} ~~quadriplo~~
longiore (intus ^{nuda} glaberrima); stylo
simplicissimo; stigmate quadri-
^{tubercu} ~~lobato~~ ~~apice~~ lobato indurito villosa-lanato-
ciliato cincto; fructu obpyrami-
dato quadrilobo, pyrenis 4 corneis.

Tab. Muthuata, one of the Feejee
Islands, in forests, at the elevation of
2000 feet.

Shrub parasitic or pseudo-para-
sitic on trees by a dilated, naked,
tuberous base cavernous within; the
dichotomous branches somewhat fleshy,
unarmed; the whole plant smooth and
glabrous. Leaves thickish, obscurely
veined, about 2 inches long, short-petioled;

lanceolate-oblong or narrowly spatulate-oblong, obtuse or acutish, the base mostly acute. Stipules ~~coalescent~~ ^{very} ~~into a~~ short, ^{naked} ~~truncate~~ sheath, caducous. Flowers sessile and crowded in small fascicles in the axils of the leaves. Calyx campanulate, about a line and a half long; the limb or free portion ~~about~~ equalling the adherent portion, truncate and entire. Corolla ^{white, reddish?} ~~reddish~~, ^{thickish, from 6 to 9 lines} ~~about~~ ^{nearly} half an inch in length, tubular, 4 cleft, perfectly glabrous and naked within as well as without, no scales or appendages in the throat; the lobes ~~narrowly~~ ^{lanceolate} oblong, valvate in aestivation. Stamens 4, inserted in the throat of the corolla, glabrous; filaments complanate, lanceolate, short; anthers oblong-linear, obtuse, attached a little above the sagittate base, in the bud convoluted in a ring around the summit of the style, the ^{slightly} stigma covering the aperture. Pollen-grains very large, spherical. Style filiform, perfectly entire, ~~stigma~~ terminated by a disciform stigma, consisting of four ^{small rounded} ~~minute~~ apiculate lobes, ~~surrounded~~ subtended by a kind

of indusiate margin which is fringed
by a circle of ~~cobine~~ arachnoid hairs.
Ovary short, 4-celled, with a single
antrous ovule erect from the base
of each cell. Drupe in the dried spe-
cimens 3 lines long, obpyramidal and
upwardly somewhat 4-lobed, the trun-
cate summit crowned in the centre
with the persistent annular limb
of the calyx which is filled by the
projecting ^{large and fleshy} epigynous disk: ~~pyrene~~
sarcocarp thin; pyrene 4, with
plane sides, an acute internal angle,
and a roundish back, enlarged and
gibbous upward; the pericarp rather
thick, smooth and even, of a hard horny
texture. Seed attached to the tapering
base of the cell by a small funiculus,
^{incorporated at the upper end,} conformed to the cavity; testa thin.
Embryo in the axis of the ^{soft} fleshy al-
bumen and of nearly its length,
greenish, terete, ~~somewhat~~ ^{inferior, gradually} incurved
above, the radicle ^{long} ~~slightly~~
clavate ^{- thickened} downwards, about thrice the length
of the narrow and flattish-semiterete coty-
ledons.

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However it may be with the two species figured by Gaudichaud with bifid styles and lacinate-cleft stigmas, the present is undoubtedly a genuine representative of Jack's genus Myrmecodia, and its stigma, as here described and figured, probably corresponds with the "stigma simplex tomentosum" of M. tuberosa. At the same time our plant differs from all other known species in wanting altogether ^{with} the beard in the throat of the corolla, as described by Jack and figured by Gaudichaud, and the fornicate scales mentioned by Blume. The pyrenae, moreover, are far from being chartaceous. There is considerable confusion about the ^{one or two} ~~two~~ species in the books, which the Dutch botanists ought to clear up.

Plate — Myrmecodia imberbis,
with the cellular-enlarged attachment. Fig. 1. A flower. 2. Corolla laid open. 3, 4. Stamens, front and back view. 5. Pistil, and the ^{limb} ~~tube~~ of the calyx laid open to show the large epigynous disk. 6. Vertical section of the calyx and ovary. 7. Summit of the style with the indusiate stigma. 8. Drupe. 9. Vertical section of the same. 10. Transverse

section of the same. 11. A seed. 12. The embryo.
The details are magnified.

Hydnophytum, Jack.

1. Hydnophytum longiflorum, Sp. nov.

It. foliis elongato-oblongis; corolla gra-
cillima (sempipollinari) intus glabra,
tubo lobis oblongis pluries longi-
ore.

Itab. Orolau, one of the Freije
Islands, at an elevation of 1000 feet;
growing on the trunks and branches
of trees.

(glabrous.)
Pseudo-parasitic, Branches ap-
parently slightly fleshy. Stipules extremely
short, truncate, caducous. Leaves
thickish, $2\frac{1}{2}$ to 4 inches long, 9 to 18 lines
wide, narrowly oblong, obtuse, often acute
at the base, on distinct but very short
petioles, obscurely feather-veined. Flowers
clustered and sessile in the axils of the
leaves in the manner of Myrmecodia.
Limb or free portion of the calyx very short,
truncate, ~~or~~ very indistinctly repand-toothed.

Corolla hypocrateriform with a slender elongated tube, half an inch in length, ^{naked and} glabrous inside; the lobes 4, oblong, obtuse, apparently valvate in aestivation. Stamens 4, inserted in the throat of the corolla; filaments very short; anthers oblong. Style filiform; stigmas 2, petaloid, reniform-ovicular. Ovary 2-celled. Ovules solitary, erect. Drupe obovoid, ~~the~~ obtusely apiculate with a conical-truncate epigynous disk, which projects beyond the ~~vesti~~ very short vestiges of the very short limb of the calyx; sarcocarp thin; putamen 2-celled, ~~crus~~ between chartaceous and cartilaginous; the cells at maturity ~~fertile~~ perhaps fissile at the top. Seed (erect) and embryo nearly as in Myrmecodia.

From the lack of materials the above description is drawn in part from sketches of ^{any analyses} Mr. Rich, which accompany the specimen. In this genus, if the analyses are correct, I should refer Gaudichaud's Myrmecodia inermis and his M. echinata, neither of which can be Jack's M. tuberosa. Like our M. imberbis, the present species differs from its congeners in the longer corolla glabrous and naked within.

Mephiti'dia, Reinw., Blume.

Two specimens of related if
 not of the same species, ^{apparently} of this
 genus, were collected in the Majai-
 jai Mountains, Luzon. But they
 are insufficient for determination
 or description.

~~From Mr. Dickinson~~

~~24. Lyttelton~~

~~Place, 1840~~

Suteria, Stb.

1. Suteria Hookeriana, Gardn.

Suteria Hookeriana, Gardn. in Hook. Lond.
Jour. Bot. 4, p. 109.

Hab. Organ Mountains, Brazil, near
Rio Janeiro. (In fruit.)

Geophila, Don.

1. Geophila reniformis, Don, Miq.

Hab. Feejee Islands. Upolu and
Savaii, Samoan Islands. Mountains near
Baños, Luzon, Philippine Islands. Prof.
Harvey likewise detected it at the Feejee
Islands: the peduncles only one-flowered.

Calycosia, N. W. Gen.

Calyx tubo angusto; limbo valde
ampliato infundibuliformi ~~seam~~
~~mem. fraxaceo~~ ~~seu petaloideo~~ 5-lobis, ~~lobis~~ ^{lobis} ~~deciduo~~,
~~seu petaloideo~~ 5-fido, lobis saepe
inequalibus ciliato-barbatis. Co-
rolla calycem modice superans,
tubulosa, fauce infundibuliformi,
lobis 5 patenter apice cornicu-
lato-cucullatis aestivatione valvatis.
Stamina 5, fauci corollae inserta,
subinclusa: filamenta brevissima:
antherae oblongo-lineares, basi
bilobae. Stylus filiformis, basi
disco epigyno elevato arcte cinctus:
stigmata 2 (v. 3), linearia
seu filiformia. Ovarium bi (raro
tri-) loculare. Ovula in loculis
solitaria, e basi erecta, anatropa.
Drupa apice nuda, dipyrrena,
rarius tripyrrena; pyrenis carti-
lagineis facie planis. Semen cav-
(vel concavis.)

itati conforme. Embryo in basi albuminis aequalis cornei parvus; cotyledonibus late ovalibus planis radícula conica brevioribus et latioribus. — Frutices stipulis intrafoliaceis subvaginatibus vel hinc discretis; sect. 1. ~~robusti~~ robusti, macrophylli, floribus capitato-congestis, capitulis bracteis latissimis membranaceis inciso-lobatis involucreatis ad apicem caulis cymoso-glomeratis (C. petiolata, C. sessilis); Sect. 2. graciles, minores, cymis ~~pedunculatis~~ nudis laxifloris, floribus pedicellatis, calycis limbo late infundibuliformi petaloideo repando-quinquelobo. (C. pubiflora, C. Milnei)*

1. *Calycosia petiolata*, sp. nov. (Tab.)

C. foliis obovatis seu obovato-lanceolatis in petiolum attenuatis; calyce breviter quinquelobo, lobis oblongis; pyrenis dorso laevi costatis.

Hab. Orolan, Feejee Islands; in forests.

*

Since the characters of this genus were published in the Proceedings of the American Academy of Arts and Sciences, vol. 4, p. 47, Dr. Stoker has placed in my hands specimens of two additional Polynesian species which may be referred to the same genus, although their flowers are in ~~open~~ loose cymes:—

Calycosia pubiflora (sp. nov.): foliis membranaceis glabris oblongo-lanceolatis acuminatis in petiolum attenuatis (4-6-pellie.); cyma laxa trichotoma cum calycisque tubo viscoso-pubescentibus, limbo crateriformi extus puberulo; drupa turbinata, pyrenis chartaceis intus excavatis. — Vili-Lava, one of the Feejee Islands, in the district of Kamoria, 96 miles inland, and 3000 feet above the sea (flowering specimen); also in "woods and mountains, Dec." (in fruit), Mr. Milne. "A large shrub." Calyx apparently white, the limb half an inch in diameter, corolla hardly exerted.

Calycosia Milnei (sp. nov.): glaberrima; foliis oblongis sublanceolatis basi attenuatis longiuscule petiolatis punctulatis (3-4-pellie.); cyma diffusa repetito-trichotoma; pedicellis gracilibus. — "Mulleum, Nov. 1853: a slender shrub, frequent on high ground." Milne, collected in the voyage cruise of the Herald in some part of Polynesia. Flowers much as in the foregoing preceding species but perfectly glabrous as also is the inflorescence. Feejee Islands, Seemann, 1830. ^{6 inches long} ~~leaves~~

Apparently a stout shrub,
nearly glabrous, with the leaves
crowded at the summit of the thick
branches. Stipules in *trafolia*-
ceous, united below into a short ^{and somewhat hairy} sheath,
above separating into four ovate-tri-
angular spreading lobes. Leaves
about a foot long, ovate, oblong,
or lanceolate-oblong with the base
tapering into a distinct petiole of
one or two inches in length, slightly
acuminate, glabrous, except some
hairiness along the midrib and
veins beneath, conspicuously feather-
veined, the primary veins 12 to 16 pairs.
Inflorescence terminal, in a ses-
sile glomerate cyme, composed
several ^{at first and} crowded capituliform ^{many-flowered} clusters,
each surrounded by an involucre
formed of one or more ~~broad and~~
thin-membranaceous, incisely lobed
or toothed, reticulate-veiny, broad bracts,

which almost equal the flowers; they
 are villous-ciliate, but otherwise
 glabrous. Flowers on very short pedi-
 cels, the lateral ones bracteolate:
 bractlets oval or oblong, entire or
 somewhat incised at the summit.
 Tube of the calyx generally inconspic-
 uous and narrow in blossom, obconic-
 cal or clavate; the limb remarkably
 amplicate, campanulate-funnel form,
 thin and membranaceous and per-
 haps more or less petaloid or colored,
^{reticulate-veiny,}
~~about~~ half an inch long, cleft often
 rather unequally about one third of
 its length into 5 oblong and obtuse
 lobes, glabrous, except that the lobes
 are densely ciliate-bearded with villous
 and many jointed hairs. ~~Stamens~~
~~inserted on the throat of the corolla~~
 Corolla scarcely twice the length of the
 calyx and very much narrower than
 it, tubular, with a somewhat funnel-
 form throat, naked within, and 5

(The color of the flowers not recorded)

oblong spreading lobes; these have hooded-corniculate tips, and are val-
vate in aestivation. } Stamens ^{inserted} ~~placed~~
in the throat of the corolla; filaments
very short, naked or slightly hairy;
anthers oblong-linear, emarginate,
deeply notched at the base. Epigynous
disk remarkably elevated, closely sur-
~~rounding~~ rounding the base of the
long and filiform naked style;
stigmas 2, narrowly linear. Ovary
in the ^{all} flowers examined narrow and
inconspicuous, but with a single narrow
ovule erect from the base of each of
the two cells. In the fruiting
specimens the bracts have all
fallen and left a naked cluster of
somewhat obovate ^{oblong} ~~and~~ and truncate
drupes. These are said to be been
red; they are naked at the summit,
the limb of the calyx having disap-
peared, very short-pedicelled, 3 or 4 lines

long; sarcocarp thin. Pyrene 2 ob-
 long; ~~amorphous~~ the pericarp car-
 tilaginous, rather thin, flat at the
 commissure, obscurely 3-4-angled
 dorsally, but not ~~grooved~~ sulcate
 nor costate. Seed conformed to the
 cell, inserted by a thin edge or margin ^{at} the very base of the
 cell, with a very thin adherent testa;
 the surface obscurely rugose or ir-
 regular; but the cartilaginous albumen
 is solid and even. Embryo near the
 base of the albumen, ~~about~~ scarcely
 a quarter of its length: radicle infe-
 rior, elongated conical; cotyledons thin
 and flat, round-oval, considerably
 broader and much shorter than the
 radicle.

This and the following species
 belong to a striking new genus of
 the Psychotrieae (including Cepha-
elideae), which is well distinguished
 by its large and ~~deciduous~~ funnel-
 form, deciduous limb of the calyx,
 which suggests the generic name.

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The ovaries ~~are~~ in the flowers examined are so small compared with the abruptly dilated calyx, and so continuous with the pedicel, as to suggest the ^{suspicion} ~~idea~~ that the blossoms are polygamous; but they are ovulate, and the style and stigmas are apparently ~~perfect~~ well-formed. The materials for the study of the floral ~~structure~~ ^{are} structure ~~is~~ scanty. Although not wholly satisfactory the plate, as engraved under the superintendence of Mr. Kich, is left untouched, excepting that I have added the details of the fruit and seed.

Plate. Calycosia petiolata.

Fig. 1. A detached flower. 2. A calyx laid open, showing the contained young corolla in bud. 3, 4. Stamens. 5. Summit of a corolla laid open. 6. Pistil, the calyx-limb cut away. 7. Vertical section of the ovary. 8. A drupe. 9. Vertical section of a drupe. 10. Transverse section of a drupe. 11. One of the pyrene, ventral view. 12. Section of the same, ~~and~~ edgewise. 13. Embryo. The details all magnified.

8

(Tab.)

2. Calycosia sessilis, sp. nov.

C. foliis spathulato-lanceolatis basi
sensim angustatis sessilibus;
floribus arcte ^{capitato} ~~congestis~~;
[^] Calyce ultra medium ~~quinquefid~~
quinquefido, lobis linearibus;
pyrenis dorso tricarimatis.

Hab. Savai, one of the Samo-
an Islands.

Shrub 4 to 6 feet high, ~~with~~
~~the~~ Leaves crowded at the summit
of the thick branches, a foot or more
in length, 2 to 3½ inches wide, spatu-
late-lanceolate with a long-attenuate
base, sessile, membranaceous, glabrous.
The venation H. as in the preceding
species. Flowers all densely crowded into
a large ~~and sessile~~ mass or capitulum,
~~occupying~~ which is sessile at the
summit of the stem, surrounded by

the ample leaves and fulcrate
with thin and membranaceous
bracts in the manner of *C. petio-*
lata; but these appear to be nar-
rower, ovate, ~~or~~ oblong, or oblong-lan-
ceolate, and more scarious or colored.
Inner bracts ~~or bractlets~~ ^{narrower} lanceolate
or linear, lacinate-trifid or
entire, strongly bearded like the
lobes of the calyx along the mar-
gins and slightly so on the back.
Pedicels of the earlier flowers 2 or 3
lines long. Limb of the calyx as
long as in *C. petiolata*, but nar-
rower; the undivided portion more
tubular but proportionally shorter;
the 5 often somewhat unequal lobes
~~narrowly linear obtuse~~, linear-
ligulate, obtuse, longer than the
whole tube, a little shorter than the
their margins ciliate with a beard of brownish, many-jointed, and
coiled, ^{apparently glassy} ~~or~~ ^{hairs.} far as ~~the~~ can be
made out, the structure of the corolla,

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Stamens, style, &c. accords with the
that of the preceding species. Ovary
also similar, but sometimes trime-
rous. Drupes oblong, 4 lines in
length, obtuse but not truncate,
grooved in the dry state; the 2 or
sometimes 3 cartilaginous pyrena flat
at the commissure, carinate on the
back with ^{three} ~~2~~ or sometimes ~~two~~ rather
sharp ridges separated by interme-
diate grooves. Seed conformed to
the cavity, and similarly ridged
or grooved on the flattish back,
the ventral face plane or nearly
so. Albumen and embryo as in ~~the~~
C. petiolata.

Plate Calycoria sessilis. Fig.
14. Transverse section of a drupe. 15. Dorsal,
and 16. Ventral view of a pyrena. 17. Section
of the same edgewise. 18. Embryo. Various
magnified.

Straussia.

Calyx tubo turbinato; limbo cupu-
liformi truncato vel repando brevi.
Corolla brevis, 4-5-fida; lobis
tubo æquilongis seu longioribus
activatione valvatis. Stamina 4-5,
fanci inserta: filamenta brevia;
antheræ oblongæ, basi fixæ. Stylus
filiformis: stigmata 2 sub dilatata.
Ovarium biloculare. Ovula in
loculis solitaria, e basi erecta,
anatropa. Drupa sapissime
pyriformis, di-pyræna; pyrenis
chartaceis vel tenuiter cartilagineis
plano-convexis levibus. Semen
erectum, ^{plano-convexum seu} leviter menis coideum;
testa tenui ~~erecta~~ adherente; Albumen
~~cartilagineum~~ corneum, ventre
sulco profundo clauso excavatum,
^{interne} ~~intus~~ ~~non~~ fissura lata tenui sub-
bilamellatum. Embryo parvus

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Coffea vel Psychotria. — Arbores
aut frutices Sandwicensis; stipulis
interpetiolaribus subconnatis obtusis
max deciduis; cyma terminali
multiflora ^{longe} pedunculata; floribus
parvis.

Coffea spec. spuria, ~~Sandwicensis~~
Cham. & Schlecht. in Linnaea, 4,
p. 32-36, excl. sp. no. 2.

Coffea, Sect. Straussia, DC. Prodr.
4, p. 502, excl. sp.

Apionema, Nutt. ined. in Herb. Hook.

1. Straussia Kaduana, (Lam.)

S. foliis subsessilibus cuneato-obovatis,
junioribus subtus ad nervos costas
cum pedicellis calycibusque saepis-
sime ferrugineo-pilosis; Corollae
fauce ~~sanda~~ imberbi; drupa

pyriformi ^{sub} quadrangulata.

Coffea Kaduana, Cham. & Schlecht.
in Linnaea, l.c.; St. l. c.; Hook.
& Arn. Bot. Beech. p. 86; Walp.
in Rel. Meyer. p. 352.

Apionema obovata & A. penduli-
flora, Nutt. in Herb. Hook.

Hab. Oahu, Sandwich Island,
in the mountains behind Honolulu.

~~A shrub or tree, with terete branches, or the branchlets more or less compressed.~~

A good detailed description of this shrub or tree is given in the Linnaea, where it was first made known, by Chamisso and Schlechtendal. We have only to add what is needed to complete the account. The fine ferruginous pubescence of the young

shoots, foliage is variable, being slight and sparse on the lower surface of some young leaves, but ^{more} copious and persistent on the midrib and veins of others, even when full grown. The leaves are ovate or oblong-ovate, usually with a cuneate-attenuate base and ~~almost~~ sessile, or with a margined petiole only a line or two in length; they vary from 2 to 4 or even 6 inches in length, and from one to 3 inches in width. Peduncle 1 to 5 inches long, commonly glabrous; the small bracts ^{vs.} ferrugineous-ciliate. Flowers only 2 lines long, greenish. Limb of the calyx cupulate, a little shorter than the turbinate ovary, truncate, but repand ^{as if} ~~and~~ obscurely 4-5-toothed, usually a little hairy under a lens, but the margin scarcely or seldom ciliate. Corolla deeply 4-5-cleft; the lobes thick oblong, valvate in aestivation; they are probably widely spreading or reflexed in anthesis, as in the other species; but

12 15
we have no expanded flowers. In
the buds ~~they are naked~~ they are
wholly glabrous and naked within.
Anthers linear-oblong, on very short
filaments. Style 2-cleft at the very apex.
Ovary 2-celled. Ovules solitary and
erect from the base of each cell.
Fruit drupaceous, with a thin pulp,
sarcocarp, pyriform, and commonly
when dry having four rather salient
ridges or costae, especially toward the
tapering base, 5 to 7 lines long, obtuse
or truncate at the apex, where it bears
the vestiges of the very short limb of
the calyx. Pyrene 2, separable at
maturity, thin, of a chartaceous or
somewhat cartilaginous texture, flat
on the ventral face, convex on the back,
smooth and even, or with a slight dor-
sal ridge, at maturity bipartible by
the dehiscence of the whole inner face (as
in *Chasalia*, L.) in the manner describ-
ed by Chamisso and Schlechtendal.

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Seed erect from the base of the cell, on a ~~short and~~ broad and flat, scale-like funiculus, somewhat meniscoidal, and with a shallow notch at the summit, the ^{slender} shape on the ^{concave} ventral face ~~forking~~ just below the summit, ~~in~~ as described by Chamisso and Schlechtendal; the dorsal side nearly ~~most~~ even; the thin and brown testa adherent to the ~~hard~~ corneous albumen. The ventral face of the albumen is furrowed for nearly its whole length by a deep but closed groove, which is transversely dilated at its termination. Entirely separate from this, there is commonly, if not always a broad ~~for~~ but very thin fissure in the axis of the albumen, which in the transverse section appears as a lunate-curved line almost dividing the albumen into an outer and an inner plate. It is symmetrical, not lined by a membrane, and not

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tracable to an infolding of the seed
like that of ~~a~~ Coffee-grain. Embryo ^{small,}
near the base of the albumen, axile;
radicle ~~slender~~ inferior, ~~less~~ ^{rather} larger than
the cordate foliaceous cotyledons.

These plants, ^(long since) dubiously referred by
Chamisso and Schlechtendal to Coffea
are but remotely related to that genus,
which (although strangely ^{left} ~~placed~~ in the
Psychotriace by Miquel, contrary to the
assigned characters of the group) is justly
~~character~~ ^{defined} by Bentham as having "the
aristation and placentation of Ixora
and Pavetta, with an axillary inflo-
rescence and a peculiar seed". The
present genus, which must retain
de Boudolle's sectional name of Straussia,
is allied to Chasalia, but well dis-
tinguished by the very short corolla as
well as by the seed.

Plate Straussia Kaduana. Fig. 11, Cluster
of fruit, of the natural size. 12, Longitudinal, and 13,
transverse section of a drupe, magnified. 14, Ventral, and 15,
ventral view of a pyrene, magnified. 16, Embryo, magnified.

11
2. Straussia Mariniana, (Tab.)

S. ^{total} fere glabra; foliis breviter seu
brevissime petiolatis obovato-
oblongis ellipticisve; corolla fauce
inter stamina breviter barbata;
drupa obovato-pyriformi.

Coffea Mariniana, Cham. &
Schlecht. l.c.; Bb. l.c.; Walp.
l.c.

C. Chamissonis, Hook. & Arn.

Bot. Beech. p. 86, vix Walp.
Apionema pulcata, Nutt. in Herb.
Hook.

Hab. Oahu, Sandwich Islands,
on the Kaala Mountains, &c. - Collected,
along with the preceding, by ^{most} ~~all~~ the
botanists who have visited these isl-
ands.

This is distinguished, I fear not
definitely enough - from the preceding
by being glabrous throughout (or rarely
with the midrib underneath and the pe-
duncle pilose with straight and not
ferugineous hairs) by the less cuneate
leaves, which often have petioles from 2
to 5 lines in length, and by having
a ^{short-}bearded spots ~~at the~~ in the throat
of the corolla, at the base of each lobe,
between the ~~very short~~ stamens. These
were overlooked by Hooker and Arnott,
in describing their Coffea Chamissonis,
which is certainly of this species; al-
though present ^{in our specimens} they are not so conspicu-
ous as would be supposed from Chamis-
son's description. Good materials are
^{needed} wanting to show whether they are truly
and uniformly wanting in S. Kaduana.
The leaves vary much in shape, from
obovate-elliptical to narrowly cuneate-
oblong. Margin of the calyx perhaps
more nearly entire than in the pre-

ceding, glabrous. Lobes of the corolla
 oblong, thick, ^{"greenish or yellowish-white"} ~~as long as the tube,~~
 valvate in aestivation, an anthesis recur-
 ved, as long as the tube, Filaments
 short, naked. Anthers oblong, fixed by
 the base. Style filiform, thickened
 upward; stigmas 2, oblong, obtuse,
 thickish. Ovary, 5, as in the last;
 the drupe also very similar, perhaps
 rather smaller and ~~not~~ more obovate,
 less ribbed when dry, or with slight
 grooves in place of the ribs.

Plate, Straussia Mariniara.

Fig. 17. ~~Fruit, of the~~ cluster of fruit, of
 the natural size. 18. Magnified trans-
 verse section of a drupe. 19. Ventral
 view of one of the pyrene.

(Tab.)

3. Straussia Hawaiiensis, Sp. Nov.

S. foliis longius petiolatis obovatis
calycibusque ^(junioribus rufis ferrugineo-pubescentibus) glaberrimis; corollae
fauce inter stamina barbata;
drupa parva ovoidea vel ob-
ovata.

Hab. Hawaii, Sandwich Islands,
 in the district of Puna, and in
 the forest near the crater Lua Pele.

A slender tree, with a slender trunk, 20-
 50 feet ^{high} ~~high~~. Glabrous throughout, or some-
 times with minute ferrugineous
 pubescence on the midrib and veins
 of ^{the} young leaves, and on the branches
 of the cyme. Leaves obovate, with
 a more or less cuneate base, 3 to 5½ inches
 long, and 2 or 3 inches broad, rounded
 at the summit, and often tipped with a
 small and abrupt blunt point, of a
 firm chartaceous texture, the 13 to 20

pairs of veins rather conspicuous underneath; the base tapering into a petiole an inch in length. Stipules ovate, very obtuse, somewhat connate, early deciduous. Peduncle terminal, one or two inches long, byrne as in the preceding, many-flowered, the primary and the secondary divisions mostly verticillate, thickish. Limb of the calyx cupulate, about the length of the ovary, truncate, entire, glabrous. Corolla $1\frac{1}{2}$ or 2 lines long; the 5 oblong lobes as long as the tube, thick, valvate in aestivation, at length reflexed; the throat with a bearded spot at the base of each lobe. Style, ovary, &c. as in the foregoing species. Fruit (apparently mature) at most 3 lines in length, short-obovate, with a slightly narrowed base; the pyrene, seed, &c. similar in structure to the two preceding species.

The conspicuously petioled and usually large leaves, and the small fruit are relied upon for distinguishing this species from ~~the~~ S. Mariniana.

Plate Straussia Hawaiensis,
 Fig. 1. A flower-bud. 2. Diagram of the aestivation of the corolla. 3. Expanded blossom. 4. Corolla laid open. 5. ~~Longitudinal~~ Ovary in longitudinal section, style, &c. 6. Cluster of fruit, of the natural size. 7. Vertical, and 8. Transverse, section of a drupe. 9. Ventral view of a pyrena. 10. Embryo. - All but fig. 6 magnified.

Chasalia, Commes.

Chasalia, Commes. in Juss. Mem. Mus.
p. 374; Benth. Niger Fl. p. 417.

Polyosus, ~~Blume~~ Lour. Fl. Coch. 1, p. 94?
Blume. Bijdr. p. 947?

Cœlospermum, Blume. Bijdr. p. 944?

1. Chasalia { montana, Miq. ?
craterispermum, sp. nov.

C. glaberrima; stipulis brevissimis vag-
inato-concretis truncatis ^{utrinque bipinnemulatis;} ~~craterispermis~~
~~foliis~~ foliis ovalibus basi acutis, venis
primariis utrinque 8-9; ~~cymsa~~ ~~acti-~~
~~laxiflora~~ ^{catycis} puctu ~~obovato~~
globoso ^{limbo} integerrimo brevissi-
mo nunc evanido coronato; pyrenis
^{membris pericarpis} crateriformibus extus intusque laevibus
^{nec} ~~hand~~ costatis nec sulcatis; semine
tenui ~~crateri~~ acetabuli formi.

Chasalia montana, Miq. Fl. Ind. Bat. 2, p. 281?
Psychotria membranifolia, Benth. in DC. Prodr. 4, p. 522?

Itab. Mangsi Islands.

Branchlets ~~terete~~ or nearly so, ^{as far as preserved} very glabrous, nodose. ~~Stipules very~~
~~short, converted into a truncate sheath,~~
~~hardly a line long, its margin at~~
~~first minutely ciliate.~~ Leaves
oval, obtuse or obtusely and slightly
pointed with an abrupt acumination,
acute at the base, or abruptly taper-
ing into a petiole of an inch or little
more in length, 5 to 9 inches long,
and 3 to 4½ wide, entirely glabrous,
light green and membranaceous in
the dried specimen, perhaps a little
succulent when fresh; the primary
veins somewhat conspicuous underneath,
8 or 9 on each side of the midrib,
diverging nearly at a right angle;
the loosely reticulated veinlets rather
inconspicuous. Flowers not seen.
They were apparently rather few, in a
loose and sessile terminal cyme, the

primary branches of which are slender,
but the pedicels short. Drupe
globose or slightly pyriform, almost
half an inch long when mature,
when young crowned with a ~~short~~ thin
ring less than half a line high, which
seems to be the whole limb of the calyx,
and which disappears from the mature
fruit: sarcocarp thin: pyrene 2,
about 4 lines wide obovate-obicular in
circumscription, hemispherical, smooth
and even on the back with only
faint indications of a central ridge
or nerve, deeply ~~concave~~ ^{but not grooved} hollowed
out on the inner face; the putamen
^{of Caryophyllaceae.} chartaceous in texture, at length
fissile around the margin so as to
separate or be separable into two con-
cavo-convex ^{thin} valves. Seed conformed to
the cavity of the putamen, erect,
menisoidal or crateriform, thin, with
a delicate adherent testa. Albumen

corneous, solid and even. Embryo next
its base, very small; the radicle in-
ferior, about the length of the ovate
and thin cotyledons

The materials are very imperfect,
except for the fruit.

2. Chasalia Arnicae, Sp. Nov.

C. glaberrima; stipulis brevissimis
vaginatis ~~truncatis~~; foliis oblongis
ovalibusque basi acutis, venis
primariis ^{utrinque} 5-8; cyma laxiflora
brevis pedunculata; calycis tubo
ultra ovarium obovatum produc-
to et in limbum crateriformem
~~subito ex~~ subquadridentatum
abrupte expanso; ^{fructu obovato;} pyrenis 2 ~~obova-~~
~~ti~~ apice subtridentatis dorso ^{leviter} car-
inatis ~~cutis~~ Ventre concaviusculis
nond sulcatis; semine scutelliformi
incurvo.

Hab. Tongatabu, one of the
Friendly Islands.

"Shrub 6 to 8 feet high", glabrous
throughout, with greenish terete branches.
Stipules very short, confluent into a ^{truncate}
sheath or ring, ~~deciduous~~ ^{than} very thin and

Scarious, deciduous or wearing away.
Leaves much as in the preceding
species, but more inclined to be oblong,
3 to 5 inches long, $1\frac{1}{2}$ to 3 inches wide,
membranaceous, with 6 or 7 pairs of
primary veins; petiole an inch or less
in length. Cyme terminal, on a pe-
duncle not over half an inch in length,
loosely rather few-flowered; pedicels
shorter than the calyx. Calyx (after
flowering) oblong-ovoidate, the obovate
tube ^{contracted and} extended a line and a half beyond
the ovary, then abruptly dilated into
a cup-shaped, ^{tense} obscurely 4-toothed, folia-
ceous limb, of nearly 2 lines in length.
"Corolla tubular, 4-cleft." Young fruit
obovoid, ^{crowded with the conspicuous length of the} ~~two~~ 2-celled, ^{calyx.} Pyrene
obovate, smooth, ~~extensively~~ the
strongly convex back carinate-^{above} ~~ridged~~
~~ridged in~~ the middle, ~~especially~~ with
a rather sharp ridge which vanishes
below; the ventral face slightly con-
cave, the truncate summit bearing
a medial and two marginal, short and

blunt teeth: seed conformed to
the putamen ^{disposed} ~~inclined~~ to split into
an outer and an inner valve, as
in the foregoing species. Seed
conformed ^{except from its base, 3 lines long} to the cell, somewhat
menisoidal, but much thicker than
in *C. craterisperma*, moderately con-
cave on the inner face, where it is
marked with a central and slightly
impressed trilincate groove, the trunc-
ate summit obscurely 3-toothed. Em-
bryo small, at the base of the corne-
ous albumen.

Since the preceding was written, I
have had the opportunity to examine a fine fruiting
~~plate~~ *Chasalia* ~~unicum~~ ^{on} ~~specimen~~ of this species gathered ~~at~~ ^{on} Navan
or Lipeka. Drupe half an inch long, exclu-
sive of the persistent and foliaceous cup-shaped
limb of the calyx, probably globose when fresh.
Seed thick (the cross section 3 lines long and
1½ lines ~~in~~ thickness), menisoidal, but the in-
ner face only lightly concave, destitute of ridges
or grooves.

3. Chasalia pyriformis, sp. nov.

C.? glaberrima; stipulis vaginantibus
truncatis brevibus; foliis oblongis
basi acutis, venis primariis utrinque
7-9; cyma sessili pauciflora?; fructu
oblongo-pyriformi calycis
limbo cupulato sub-4 dentato
coronato; pyrenis 2 ventre planis
dorso ~~ecar~~ leviter tuberculatis
non carinatis; semine scutellifor-
mi planiusculo.

Hab. Samoa or Navigators'
Islands.

A single ~~and~~ specimen, in fruit,
occurs in the collection, which I ^{place} ~~refer~~
ⁱⁿ Chasalia on account of its mani-
fest affinity to the foregoing species,
but it might as well, perhaps, be
referred to Psychotria. The truncate
vaginate stipules are like those of C.

Anicorum and are equally deciduous, only the uppermost remaining. Leaves much like the last, light green, very glabrous, 4 or 5 inches long, about 2 inches wide, tapering into a rather short petiole. The cyme appears to have been strictly sessile at the summit of the ~~branch~~ ~~stem~~, short, and few-flowered. Flowers not seen. Drupe oblong or elongated-pyriform, 8 lines long, crowned with the limb or free portion of the calyx ~~much~~ smaller than that of C. Anicorum, only $1\frac{1}{2}$ lines long; Sarcocarp thin; pyrene oblate-oblong, 3 lines broad, thin, cartilaginous, plano-convex, not grooved nor costate, but obscurely tuberculate, or rugose, or uneven on the back, especially near the truncate or slightly emarginate summit. Seed scutelliform, lightly concave on the inner face, and obscurely uneven, like the pitamen, on the back; otherwise nearly as in C.

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Anicorum. - Addition materials
of this ~~species~~ and the foregoing are
needed for further comparison.

Plate

In Remy's collection from Oahu,
Sandwich Islands is a Chasalia? (or
perhaps a Psychotria) too imperfect
for determination.

= Psychotria hexandra Willd.

Psychotria, Linu.

* Oceanica.

(Tab.)

Psychotria Brackenridgii, sp. nov.

P. stipulis caducis; foliis oblongo-lanceolatis utrinque acutis vel acuminatis basi in petiolum longiusculum angustatis fere glabris chartaceis; pedunculis 1-5 terminalibus elongatis cymam trichotomam multifloram gerentibus cum radiis pedicellisque ferrugineo-puberis; fructibus ovalibus 8-costatis truncatis calycis limbo ~~per brevem caps~~ parvo cupuliformi coronatis puberulis; pyrenis tenuiter cartilagineis intus planis dorso convexo carinato-tricostatis.

Hab. Ovalau, Feejee Islands.
(In fruit only.)

~~Appare~~
~~the~~

of *Psychotria*

Of all our species this most approaches those which I have referred to *Chasalia*. ~~It is probably a large~~
~~shrub,~~ in the fruit. The flowers
are unknown. Branches stout, nodose,
glabrous. Stipules not seen, having
fallen from the specimens. Leaves
of a rather firm ~~tex~~ consistence,
oblong-lanceolate, 6 or 8 inches long,
1½ to 2½ wide, more or less acuminate,
tapering at the base into a
petiole of one or two inches in length,
glabrous, except a few small hairs
along the ^{stout} midrib underneath; the
primary veins prominent, about 12
pairs; the veinlets obscure. Peduncles
terminal, 3 inches long, in one
specimen solitary, in the other
there are 5 in ^{axillary} umbel, clothed
with a fine rusty pubescence, as
is the rest of the inflorescence. Ovary
corymbose, rather small, and apparently
loose and open twice or thrice trichotomous; the primary rays about

half an inch long, slender; pedicels in fruit from 2 to 4 lines long. Drupe $4\frac{1}{2}$ or 5 lines long, short oval, very obtuse at the base and truncate at the summit, the centre of which is apiculate with the persistent, small, obscurely 4-toothed limb of the calyx, of scarcely more than half a line in length. In the dry state, the sarcocarp being thin, it is pretty conspicuously 8-ribbed, and this is noted to be the case in the fresh plant. Pyrene 2, plano-convex, ^{3 lines wide;} the inner face not grooved nor concave, the outer ~~3-ribbed~~ marked with 3 sharp and salient equidistant ribs, the summit retuse; the ~~putamen~~ base thin and obtuse; putamen thin and cartilaginous, or chartaceo-crustaceous. Seed erect, flat, ^{and thin,} scutelliform, somewhat concave on the ~~inner~~ ventral face, acutely 3-ribbed on the dorsal.

Plate *Psychotria Brackenridgii*, Fig. 15. Pedicel and fruit, of the natural size. 16. Longitudi-

=nal, and 17, Transverse, section of a drupe, magnified. 18. Dorsal view of one of the pyrenes, magnified.

(Tab.)
Psychotria closterocarpa, Sp. Nov.

P. glabra; foliis oblongo-lanceolatis magnis basi in petiolum longum angustatis, venis primariis conspicuis utrinque 15-19; cymis terminalibus ~~per~~ pedunculatis; fructibus pedicellatis fusi formibus limbo calycis cupulato truncato collo sublato coronatis; pyrenis lineari-oblongis apice bidentatis intus planis dorso obtuse tricostratis suberoso-crustaceis.

Hab. Savai, one of the Samoan or Navigator's Islands.

Branches stout. Stipules not seen. Leaves perhaps somewhat fleshy, glabrous, oblong-lanceolate, 7 to 12 inches long, $2\frac{1}{2}$ or 3 inches wide, acute at the base or at both ends; the primary veins 15 to 19 pairs, prominent

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on both faces, diverging nearly at a
right angles ~~from~~ ^{with} the strong midrib,
and ~~sums~~ ^{petioles 2 1/2 or 3 inches long,} vanishing near the margin;
veinlets not conspicuous: Flowers not
seen. Cymes apparently 3 from
the summit of the branch, on pedun-
cles of 3 or 4 inches in length. Drupes
pedicelled, fusiform, about 7 lines long,
and crowned with a cupuliform truncate
limb of the calyx a line and a half
long, which is continuous with the
more or less narrowed apex of the fruit,
and a little enlarged upwards: Sarco-
carp thin. Pyrene 2, rather narrow,
5 or 6 lines long, ^{2 lines wide,} plano-convex, of a rather
corky crustaceous texture, flat within, obtu-
sely 3-ribbed on the back, the apex having a
narrow notch between two short and blunt
tooth-like projections. Seed conformed to the
cell; the inner ~~surface~~ face slightly
concave, the outer 3-ribbed. Albumen
cartilaginous. - Apparently a well-marked
species; but characterised from imperfect
materials except as to the fruit.

Plate , Psychotria cloteri-
carpa. Fig. 36, Drupe, of the natural
 size, 37, Magnified transverse section
 of the same. 38, Dorsal view of a py-
 rama, magnified.

(Tab.)

Psychotria Forsteriana, Sp. Nov.

P. glabra; stipulis tenuiter & cariosis
 caducis; foliis membranaceis ob-
 longo-lanceolatis ^{sem lanceolatis} ~~nunc~~ obovato-
 oblongis utrinque acuminatis
 modice petiolatis, Venis primariis
 9-11-jugis; Cyma ^{multiflora} terminali compo-
 sita tripartita vel 3, ~~radicis~~ pedun-
 culis radicisve petiolum aequan-
 tibus; floribus confertis pedicel-
 latis parvis; calycis limbo expan-
 so ~~crateri~~ integerrimo ovario
 aequilongo; corolla brevi ad medium
 usque ~~5-partita~~ ^{fauce} 5-fida; ^{villosissima} fructibus
 obovatis retusis, junioribus fere
 obovatis; pyrenis dorso obtuse
 costatis subrugosis intus concaviscu-
 lis.

Psychotria Asiatica, Forst., Prodr. p.
 16, no. 90?

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Var. β . Vitiensis: foliis longius petio-
latis (marginibus aut planis aut
undulatis); fructu vix retuso.

Hab. Tahiti, Society Islands. Also
Samoa and Navigators' Islands.

Var. β . Ovolau, Viti or Feejee Islands.

Tree or shrub glabrous, with
slender and somewhat compressed, rather
herbaceous branchlets. Leaves mem-
branaceous, thin, bright green and
of the same hue both sides, oblong-
lanceolate, or sometimes verging to oblong-
obovate, ^{sometimes merely lanceolate} mostly acuminate at both ends,
^{from one to} $\frac{1}{2}$ to 8 inches long, $\frac{1}{2}$ or $2\frac{1}{2}$ inches wide,
the 9 to 11 pairs of primary veins slender
but rather conspicuous: petiole slender half
an inch to an inch in length. Stipules
^{thin and scarious on nascent shoots, very caducous,}
~~very short, somewhat united, truncate,~~
~~leaving a narrow ring.~~
~~Caducous,~~ ^{very} terminal, many-
flowered, sessile and triple, or single
and short-peduncled, the branches vertic-
illate; pedicels obscurely pubescent,
about the length of the flowers, which
are barely 2 lines in length. Calyx-tube
turbinate, ^{not longer than the} ~~scarcely as long as~~ the expanded
pateriform ^{and} entire limb. Corolla cam-

panulate-funnel form, white, 5-cleft.
(rarely 6-cleft) about to the middle.
^{very} villous in the throat at the insertion
of the stamens; the oblong obtuse lobes
valvate in aestivation. Ovary erect
from the base of the cell. Style deeply
2-cleft, but the two filiform lobes
or stigmas often united by their edges
into a linear ^{or upwardly dilated} ~~elevated or fl.~~ body.
Drupe short-obovate, about 4 lines
long, retuse at the naked summit, or
when ~~partly grown~~ the pulp is not
much developed obovate. Pyrene
turgid, rather cartilaginous, rather ob-
scurely 3-5-ribbed and rugose or uneven
on the back, slightly sulcate down
the middle of the ventral face. Seed
sulcate on the ventral face, even or
obscurely ribbed on the back.

The specimens from the Feejee
Islands, var. β , which may be
safely joined to this species, have

longer petioles in proportion to the size of the leaves, viz. an inch or even more in length, while the blade is only 4 or 5 inches long, and from one to 2 inches wide; the ring left by the fall of the stipules is often minutely hairy within; and the drupes are mostly smaller, barely 3 lines long and scarcely or slightly retuse. — The plant from Tahiti is most probably Forster's P. Asiatica, of which I have seen two leaves only, in the herbarium of the British Museum.

This is the Stylocoryne corymbosa of Bernier's Flegge list, no. 236, but surely not of Labillardiere.

A narrow-leaved form has the leaves remarkably undulate.

Plate Psychotria Forsteriana. Fig.
23. A drupe, of the natural size. 24. Transverse,
and 25, longitudinal section, magnified.

(77)

(Tab.)

Psychotria turbinata, Sp. Nov. /

P. fere glabra; stipulis caducis; foliis obovato-oblongis nunc oblongo-lanceolatis basi in petiolum longiusculum attenuatis sub-membranaceis, venis primariis 9-12-jugis; cyma terminali multiflora petiolo vix superante; fructibus turbina-
tis vertice planis; pyrenis 2-3 ventre inferne planis. superne profunde ex-
sculptis dorsoque ~~incrassatis~~ tuberculato-costati incrassatis, ~~seminibus divaricantibus~~

Hab. Ovolao, Feejee Islands.
(Also Viti-levu, Mac Gillivray, in voy. Herald.)

Shrub or tree with stout branches, glabrous, except a microscopic pubescence on the cyme, petioles, and lower side of the midrib. Stipules fallen, leaving scarcely a trace. Leaves 6 or 8 inches long, 3, $3\frac{1}{2}$, or rarely only 2 inches broad, obovate,

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oblong, or the uppermost in one specimen
oblong-lanceolate and acute, generally
rather obtuse, the base tapering into a pe-
tiole of an inch or more in length,
the texture thickish-membranaceous;
the primary veins 9 to 12 pairs, slender,
but rather conspicuous beneath. Cyme-
terminal, generally triple, the 3 stout
peduncles less than an inch long, twice
or thrice trichotomous or ~~the lower~~ verti-
cillate; pedicels in fruit 2 lines long.
Flowers not seen. Drupes broadly
turbinate and generally (when dispyrenous)
a little flattened laterally, at least in
the ~~dry~~ dried state, ~~flat-topped~~
with a large ^{terminal} areola, the breadth at
the ~~top~~ flat top ^(3 lines) nearly equal to the
length. Pyrene 2 or sometimes 3,
thin below and not grooved or costate,
except a small salient ^{rib} on the middle of
the flat ventral face: this face is
~~rather~~ somewhat obcordate in shape,

the upper part being deeply hollowed out on the inner face and the cup-shaped space filled with sarcocarp, while posteriorly it is abruptly enlarged and tuberculate-thickened ~~the~~ or obscurely 3-5-costate. Seed conformed to the cell; the transverse section ^{near} ~~at~~ the bottom ^{plane} flat on the ventral face, but towards the summit strongly concave and 3-5-lobed or ribbed on the back. In the vertical section the seeds diverge from each other upwards. Embryo near the base of the hard albumen. Cotyledons orbicular, thin, a little broader and shorter than the radicle.

Plate Psychotria turbinata. Fig. 8, Drupes of the natural size. 9, Longitudinal, and 10, transverse section of a drupe. 11, Ventral and 12, ~~longitudinal~~ dorsal view of a pyrene. 13, Ventral, and 14, dorsal view of a seed. All except fig. 8 magnified.

(Tab.)

Psychotria insularum, Sp. Nov. {

P. glabra; stipulis ^{lanceolatis acuminatis} caducis; foliis ob-
longis utrinque acutis vel acumi-
natis longiuscule petiolatis char-
taceo-membranaceis, venis primariis
7-10-jugis; cyma terminali sessili
~~3-5-partita~~, composita, radiis 3-5
trichotomis divisionibusque divarica-
tis gracilibus apice 3-5-floris; floribus
graciliter pedicellatis; calycis limbo
crateriformi ~~expansa~~ ovario aequila-
ngo, dentibus denticulatisve 5
acutissimis; corollae ~~brevis fida~~ fauce
villosissima; fructibus ovoides
brevis coronatis; pyrenis intus
planis dorso tricostatis et molliter
~~cristulatis~~ rugoso-muriculatis.

(Savai,

Hab. Tutuila, and Upolu, Pa-
moan Islands. Tongatabu, Friendly
Islands. (Also Society Islands, Midvick, and
Hue Islands, if Saman's No. 250 belongs here.)

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A tall shrub, glabrous throughout, with terete branches; the internodes rather long. Leaves oblong, varying occasionally toward lanceolate or oval, acute or acuminate at both ends, 3 to 6 inches long, rather chartaceous in texture, the 7 to 10 pairs of primary veins slender but rather conspicuous; petioles from half an inch to an inch and a half in length. Stipules rather large, lanceolate, acuminate, very thin, caducous when the leaves expand. Cyme terminal, or becoming lateral by the continuation of the stem, very loose and open, generally sessile and triple or quintuple, dividing at the base into 3 or 5 slender rays (1 or 2 inches long, or rarely much shorter), and these into trichotomous divisions, which are commonly widely divergent, and bear from 3 to 5 flowers on slender pedicels of 2 or 3 lines in length. Limb

of the calyx rather conspicuous, open
cup-shaped, much broader than the ovary
and of about its ^{at most a line and a half long,} length, its margin
truncate, and furnished with 5,
either minute or more conspicuous,
subulate or acute, often unequal
teeth. Corolla funnel-form, gla-
brous outside, the tube 3 lines long,
very villous ^{and velvety} in the throat; the lobes
5, short, oblong, not cucullate. An-
thers oblong-linear, longer than the fila-
ment. Style glabrous; stigmas 2,
thick. ^{red, void,} ~~Supee~~ ^{ovate}, about 3 lines
long, crowned with the short persis-
tent limb of the calyx. Pyrene 2,
plano-convex, rather strongly 3-ribbed
on the back, and very uneven with
soft ~~rough~~ small projections, which wear
away. Seed flat on the inner face, 3-
ribbed on the back, ^{small,} embryo at the
base of the hard albumen.

The foliage and fruit of P. insularum considerably resembles P. elliptica, Ker; but the stipules, ^{pedicels,} the calyx, &c. are quite different.

Plate Psychotria insularum.
Fig. 26. Fruits, of the natural size.
27, Longitudinal, and 28, Transverse section
of a drupe, enlarged.

Psychotria collina, Labill.

Psychotria collina, Labill, Serot. Austr.
Cauld. p. 47, t. 47; Seem. in Bonpl. 1841,
p. 257.

Hab. Feejee Islands: an imperfect
fruiting specimen, answering to Seemann's
no. 244, which he refers to P. collina, appar-
ently with ^{sufficient} ~~good~~ reason. I suspect that
his no. 254, in flower, with larger leaves
is of the same species. The fruit is globular
and the corolla much shorter than in the preceding
species.

Psychotria lephrozantha, Sp. Nov.

P. stipulis caducis; foliis ovalibus utrin-
que abrupte acutis, ^{ut acuminatis} petiolatis ramis=
que glabris; cyma terminali pedun-
culata effusa decomposita; pedicel-
lis gracilibus floribus brevi flore
brevioribus; calycis limbo subintegerrimo
cupulato ovario turbinato ~~brevi~~
breviore; corolla infundibulifor-
mi extus pruinoso-canescente ~~bus~~

Var. β . foliis minoribus oblongis; puc-
tibus subglobosis.

Hab. Sandalwood Bay, Nanna
Lena, one of the Feejee Islands; in
flower. Var. β . Ovalau, ~~Feejee~~ one
of the smaller Feejee Islands; in young
fruit.

Branches slender, perhaps sarmentose,
glabrous, as is the whole plant, except
the corolla; the inflorescence obscurely
pulverulent, at least when young.
Stipules fallen. Leaves oval and

about 3 inches long, or in the fruiting
specimens from Ovolau barely 2
inches long and oblong, abruptly acute
or somewhat acuminate, at both ends,
rather chartaceous, dull green and
of nearly the same hue both
sides, the 7 to 9 pairs of transverse
primary veins inconspicuous; pe-
ticles half an inch or less in length.
Ovary peduncled, often conspicuously
so, decomposed and diffuse, the stan-
der divergent branches ^{loosely} many-flowered;
pedicels ~~slender, 1/2 to 3 lines~~ filiform,
1 1/2 to 3 lines long. Calyx with a
truncate ~~cupul~~ and nearly entire cu-
pulate limb, with is ~~rather~~ shorter than
the turbinate 2-celled ovary, and about
the length of the narrow epigynous disk.
Corolla 3 lines long, clavate in the bud,
canescent or finely frosted over with
a coating of minute white grains;
limb 5-cleft, the lobes ^{valvate} oblong and obtuse;
throat moderately villous. Filaments
short; anthers oblong. Ovules solitary
and erect from the base of the cells.
~~Stamens~~ ~~drapes~~ (in + Style filiform,
glabrous; entire; stigmas 2, linear-oblong,

divergent. Immature drupes (in var. B.) globular, 2 lines long; the pyrene and seed apparently flat on the face, ~~more or less~~ 3-ribbed on the back.

Mr. Macsillivray, in the voyage of the Rattlesnake collected at Cape York, Tropical Australia, specimens which ^{seem to} ~~apparently~~ belong to this species, but with a shorter and broader, less pruinose corolla, and more distinctly toothed calyx.

Psychotria serpens, Linn. (Tab.)

Psychotria serpens, Linn. Mant. p. 204;
Ob. Prodr. 4 p. 519; Hook. & Arn. Bot.
Beech. Voy. p. 193; Benth. in Kew Jour.
Bot. 4. p. 198.

P. scandens, Hook. & Arn. l.c.

P. parvula, Gray in Proceed. Amer. Acad.
4. p. 45.

Grumilea polycarpa, Miq. Fl. Ind. Bat. 2, p. 295.

Hab. Ovolau and Muthuata,
Feejee Islands.

Apparently a ~~low~~ small and
straggling or trailing shrub, ~~with~~
~~the aspect of P. serpens~~, glabrous;
the slender and obscurely four-sided
or terete branchlets very leafy. Leaves
only an inch long, of a chartaceous
texture, dull, of ~~the~~ nearly the same
hue both sides, obovate, obtuse,
the base abruptly ~~contra~~ narrowed into
a petiole of about a line and a half
in length. Stipules wholly fallen.
Cyme terminal, short-peduncled, small,

loosely many-flowered, Calyx only slightly produced beyond the globose-urceolate ovary, the ~~short~~ limb with 5 ^{very} short and acute teeth, Corolla not seen. Drupes $2\frac{1}{2}$ lines long, globose, red? Pyrena 2, almost hemispherical, thin crustaceous, nearly flat on the inner face, ^{dorsally} marked with 3 ^{or 2} ~~very~~ strong and very obtuse ribs, separated by narrow intervals, seed slightly concave on the inner face, strongly 2-3-ribbed on the back.

Having at length been able to make the requisite comparison, I cannot doubt that these Feejee specimens (although the corolla is unknown) are identical with the ~~the~~ species of the Coast of China, and the Lov Choo Islands, ^{which also inhabits Sumatra,} But the inflorescence wants the minute glaucous pruinosity, and the leaves are rather thinner. The albumen is not ruminated.

Plate Psychotria serpens. Fig. 32. Fruit, &c. of the natural size. 33. Transverse section of a drupe, magnified. 34. A pyrena, and 35. a seed, dorsal views, magnified.

Psychotria ^{gracilis} ~~leptophylla~~ Sp. Nov.

P. glaberrima; ramis gracillimis;
stipulis quadrisubulatis deciduis; foliis
lanceolatis membranaceis attenuato-
acuminatis basi in petiolum an-
gustatis; cyma parva terminali
pluriflora breviter pedunculata;
calycis limbo expanso crateriformi
ovario subaequilongo 5-dentato; Corolla
brevis 5-fida intus glabra; fila-
mentis gracilibus antheris longior-
ibus.

Hab. Nanna-levu, one of the
Fuejee Islands

Apparently a shrub, very smooth
and glabrous, with very slender terete
branchlets. Stipules 4, sitaceous-sub-
ulate, about a line and a half long,
barely united into a ring at the base,

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hardly deciduous. Leaves membra-
ceous, ^{and of the same hue both sides, rather shining} yellowish-green, lanceolate with
a long and gradual acumination, 2
or 3 inches long, a half or a quarter
of an inch wide in the middle, taper-
ing into a slender petiole of 2 or 3 lines
in length; the veins transverse, very nu-
merous, inconspicuous. Peduncle termi-
nal, half an inch or less in length, bear-
ing a small and corymbose, rather many-
flowered cyme. Pedicels short. Flowers
2 lines long. Limb of the calyx dilated-
cup-shaped, rather strongly 5-toothed,
much broader and about the length of the
obovate ovary. Corolla short, ~~from the~~
^{deeply} 5-cleft, entirely glabrous inside; the
lobes oblong, the apex a little thickened
and inflexed. Filaments slender,
inserted rather low down, considerably
longer than the oblong-linear anthers.
Style rather short: stigmas 2, obtuse.
Fruit unknown.

Psychotria calycosa, Sp. Nov.

P. ? glabra; stipulis caducis; foliis anguste oblongis seu oblongo-lanceolatis subacuminatis basi in petiolum brevem attenuatis; cyma terminali foliis breviora pedunculata confertiflora; floribus pedicellatis; calycis limbo amplissimo foliaceo e basi infundibuliformi expanso 5-lobo; corolla tubuloso-infundibuliformi breviter 5-fido, lobis apice saecatis extus pistellis intus barbatis.

Hab. Ovolau, one of the Feejee Islands. (A single specimen also collected by Milne, in voy. Herald.)

Shrub with very leafy and rather slender branches, ~~slender~~ glabrous. Stipules lanceolate or subulate? caducous. Leaves of a rather firm texture, narrowly oblong or oblong-lanceolate, obtusely acuminate, 3 or 4 inches long, narrowed at the base into petiole of only 3 or 4 lines in length, dull, of the same hue

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both sides, the veins not prominent.
Peduncle terminal, an inch or less
in length, slender, bearing a small
cyme of about 3 primary branches, each
fasciculately ~~many~~^{several}-flowered. Pedicels
2 or 3 lines long, filiform, naked.
Calyx with a turbinate adherent tube of
scarcely a line in length, continued into ~~a~~
a dilated-infundibuliform and explanate,
foliaceous, ~~and somewhat erect~~^{often} 5-lobed
limb of about 2 lines in length; the
lobes ovate, ^{often} more or less unequal.
Corolla tubular-funnelform, ~~5 or nearly 6~~
lines long, glabrous except at the sum-
mit; the 5 ~~short~~ oblong lobes, valvate
in activation, conspicuously saccate-
hooded at the tip, minutely and
~~sparsely~~ scabrous-hirsute outside, minutely
and densely bearded inside for the
whole length, the throat ~~more densely~~
villos. Stamens inserted in the
throat of the corolla; anthers oblong-lin-
ear, longer than the filaments. Style
filiform; stigmas 2, short and thick.
Ovary 2-celled, with a solitary ovule
erect from the base of each cell. Fruit
not seen.

P. Nitensis, Seem, Bot. in Bouplandia, 1861, p. 286,
is a variety of this, with the calyx less lobed.

(Tab.)

Psychotria ^{macrocalyx,} ~~calycantha~~, Sp. Nov. }

P. glaberrima } ramis gracilibus folio-
 sissimis; stipulis ovatis mucronatis
 caducis; foliis lanceolatis seu
 oblongo-lanceolatis longe acuminatis
 chartaceis basi in petiolum at-
 tenuatis; pedunculis ¹⁻³ terminalibus
~~filiformibus~~ 1-5-floris pedicellisque
 filiformibus; calycis limbo tubuloso
 angusto breviter 5-dentato ~~perispermato~~
~~demum fissis~~ drupa ovoidea sub-
 aequilongo; pyrenis compressis intus
 planis dorso uni vel subtricarina-
 tis.

Hab. Sandalwood Bay, Nanna-levu,
 one of the Feejee Islands. Also Tonga-
 taba.

Shrub with slender and very leafy
 branches, glabrous. Stipules small,

Scaly, ovate, mucronate, puberulent
externally, caducous. Leaves rather
chartaceous in texture, lanceolate, or
sometimes oblong-lanceolate, usually
very gradually acuminate, and also
lapping at the base into a short
petiole, of the same hue both
sides, inconspicuously veiny, $2\frac{1}{2}$ to 4
inches long, half or three fourths of
an inch wide. Peduncles from one
to 3 from the summit of the branches,
filiform, an inch or an inch and a
half in length, bearing a solitary
flower, or commonly from 3 to 5 flowers,
at the summit; the lateral ones on
filiform pedicels 4 or 5 lines in length. A
young flower bud exhibited a clavate
ovary, surmounted by a ~~free~~ prolonga-
tion of the calyx into a free tube
of double the length of the ovary, of her-
baceous texture, and (often unequally)
5 toothed at the summit. The ~~only~~
corolla of this bud, - the only one ex-

(still undeveloped and
 anined,— was yet much shorter than
 the calyx, glabrous, except the tips which
 were saccate or produced as in *P. calycosa*,
 but less conspicuously, slightly bearded
 inside. Style 2-cleft at the apex.
 The specimens are mainly in fruit,
 Drupe ovoid, 4 lines long, crowned with
 the tubular or somewhat campanulate
 limb of the calyx, which is often 2 or
 3 lines in length, frequently split down
 on one side. Pyrene 2, plano-convex,
 oval or oblong, cartilaginous, strongly
 carinate ~~one-ribbed~~ with a salient
 dorsal rib, and sometimes with two
 smaller ribs. Seed conformed to the
 cell, strongly one-ribbed on the back,
 flat on the inner face. Embryo
 small in hard albumen.

Plate *Psychotria macrocalyx*, Fig.
 29. A branchlet in fruit, of the natural size.
 30. Longitudinal, and 31. Transverse section
 of a drupe, magnified.

Psychotria filipes, Sp. Nov.

P. glabra; stipulis caducis; foliis lanceolato- sen obovato- oblongis acuminatis basi paullo angus- tata sapius subcordatis longe petiolatis; pedunculis terminalibus 2-5 filiformibus folia subequan- tibus cymam effusam pluri- floram gerentibus, radiis 3-4 pedi- cellisque gracilibus; calycis limbo crateriformi 4- dentato ovario breviore; corolla brevi 4- fida fauce fere nuda; fructu immature ovato.

Itab. Leejee Islands.

A glabrous shrub, with rather slender branches, the leaves crowded at the summit of the flowering ones. Stipules apparently ovate-lanceolate, acuminate, very caducous. Leaves mem-

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~~nearly~~ ^{from sides} green and nearly of the same hue
bracteous, 3 or 4 inches long, one to
nearly 2 inches wide near the middle,
rather strongly acuminate, gradually
and moderately narrowed towards the base, which however,
is generally although slightly cordate,
but sometimes only retuse; the primary
veins 9 or 10 pairs, not inconspicuous!
petioles slender, from three fourths of an
inch to an inch and a half long. Peduncles
very long and slender, naked, from 2 to 5 in
a fascicle at the summit of the branches,
about 2 inches long to their division into
3 or 4 ~~radii~~ filiform radii about half an
inch long, which are umbellately or cymose-
ly 5-9-flowered; pedicels 1 to 3 lines long.
Flowers very small, a line and a half long.
Ovary turbinate or at length urceolate,
with a single ovule erect from the base of
each cell, crowned with the conspic-
uous, but not very large, open cup-shaped,
thin and rather scarious, 4-toothed limb
of the calyx. Corolla short, 4-clift; the lobes ob-
long, plane, glabrous except a slight villosity at the
insertion ^{of} each filament. These are inserted pretty

low down, and are slender, and twice
the length of the anthers. Immature
fruit ovate, small. Seeds, etc. not
seen.

No. 253 of Seemann's Freije collection ^{closely} ~~much~~ resembles our specimen, except that the limb of the calyx is truncate and entire. Its fruit is nearly that of P. platycocca. It is probably a new species, nearly related to P. filipes.

(Tab.)

Psychotria apodantha, sp. nov.

P. stipulis longe setaceo-acuminatis
caducis; foliis lanceolatis sensim
acuminatis basi acutis vel obtusis
membranaceis glabris, petiolo pri-
mum ferrugineo-puberulo; fructibus
(1-3?) terminalibus subsessilibus
ovalibus ^{oblongis} ~~oblongis~~ calycis limbo cupuliformi
leviter 5-dentato coronato; pyrenis
seminibusque intus planis dorso
1-3-~~costatis~~ costatis.

Tab. Samoan or Navigator's
Islands.

There is only a fruiting specimen
of this ~~apparently~~ very distinct species.
It is apparently a shrub, glabrous or
nearly so, except a slight ferrugineous
pubescence on the petioles and midrib
when young. The stipules seem to be

lanceolate with a long setaceous ac-
 mination, scarious, and very caducous.
 Leaves membranaceous, 3 or 4 inches long,
 about two thirds of an inch wide, lan-
 ceolate, with a gradual acumination,
 either acute or obtuse at the base,
 the primary veins 14 to 16 pairs, slender,
 not very conspicuous. Flowers not
 seen. Drupes solitary or 2 or 3
 together at the summit of the branches,
 almost sessile, oblong-ovoid, half an
 inch long, inclusive of the rather conspic-
 uous persistent crown, which is a line or
 more in length, cup-shaped, and more or
 less 5-toothed. Pyrene 2, thin-crustace-
 ous, flat on the ventral face, obtusely
 and strongly 1-3-ribbed on the back,
 seed conformed to the cell, flat on the
~~inner~~ ventral face, and with one or 3
 ribs on the back.

Plate

Psychotria apodantha.

Fig. 19, Leaves and a drupe, of the natural
 size. 20, Enlarged transverse section of a drupe.
 21, Ventral, and 22, Dorsal view of a pyrene,
 magnified.

Psychotria hypargyrea, Sp. Nov. (Tab.)

P. glabra; stipulis bifidis caducis; foliis obovato-oblongis seu oblongo-lanceolatis acuminatis basi in petiolum brevem attenuatis chartaceis. supra viridibus sublus argentato-pallidis; pedunculis 1-3 terminalibus apice 3-5-floris; floribus brevissime pedicellatis; calycis limbo parvo 5-dentato; corolla infundibuliformi breviter 5-fida intus glabra; filamentis brevissimis; fructibus globosis (in siccis acute costatis) ~~apice~~ calvis; pyrenis cartilagineis tenuibus ventre planis leviter obcordatis margine acutissimis dorso medio 1-3-cristato-alatis; semine triptero.

Tab. Orolan, one of the Feejee Islands.

Of this there are one or two specimens with flower-buds and rather small leaves (the habitat not recorded), and another (from Orolan)

with larger leaves and mature fruit. The whitish somewhat silvery sheen of the lower face of the leaves is the same on both and well marks the species. It is a shrub or tree, wholly glabrous. Stipules 2 intrafoliaceous, short, ovate or oblong, 2-cleft, somewhat ciliate, very caducous. Leaves chartaceous in texture, varying from ovate-oblong to oblong-lanceolate, more or less abruptly acuminate, 2 to 5 inches long, tapering at the base into a petiole 3 or 4 lines in length; primary veins 9 to 12 pairs, slender, but manifest; the upper surface bright green; the lower ~~side~~ ^{pale} ~~pale~~ ^{silvery} as if with very ^{fine} ^{terminal} ^{stipules} ^{much} ^{shorter} ^{than} ^{the} ^{leaves} ^{far} ^{finer} ^{and} ^{closer} ^{scattered} ^{flowers} ^{small} ^{limb} ^{of} ^{the} ^{calyx} ^{shorter} ^{than} ^{the} ^{turbinate} ^{ovary} ^{5-toothed}. Corolla tubular-funneliform, 3 or 4 lines long, with 5 short oblong lobes, valvate in activation, glabrous both within and without. Filaments Anthers almost sessile in the throat, linear-oblong. Stigma 2-lobed. Ovary 2-celled, with a single ovule erect from the base of each cell. Drupes globose, with a rather depressed naked summit, in the dried

state sharply costate, the flattish summit naked, or with only obscure indications ~~vestiges~~ of a calyx-limb. Pyrene 2, thin, cartilaginous, appearing 3-winged and with dorsal wing ~~itself~~ or sharp ridge itself often two-winged or three-winged; ventral face flat, nearly 3 lines in length and breadth, somewhat obcordately-notched ~~from~~ at the summit, the ~~slightly convex dorsal face~~ edges very narrow and acute; the dorsal face slightly convex, and in the centre bearing either a narrow and simple very sharp wing, a line in breadth, or else it is ~~thicker~~ thicker and surmounted by 2 or even 3 narrower wings or thin crests. Seed ~~not~~ conformed to the cell, thin and flat, with a salient strong ridge or wing on the back.

Plate *Psychotria* ~~pteryperma~~ *hypargyrea*. Fig. 1. A branch in fruit, and 2. Branchlet with flower-buds. of the natural size. 3. Vertical section of a flower-bud. 4. Transverse section of a drupe. 5. Transverse section of a pair of pyrene. 6. Dorsal, and 7. Ventral view of a pyrene. The details magnified.

Psychotria (*Piptilerna*) *cordata*, Sp. Nov. (Tab.)

P. glabra; stipulis ovatis? caducis; foliis
oblongo-sen lanceolato-ovatis promissae
acuminatis basi cordatis longe
petiolatis; capitulo aete sessili
plurifloro bracteis squamaceis
obovato-rotundis circiter 6 caducis involu-
crato; calycis limbo brevi truncato;
corolla tubulosa ^{5-7-nervis} ~~fauce~~ ~~cune~~ ~~fila-~~
~~mentis brevissimis villosa barbata~~; pue-
libus elongato-pyramidalis; pyrenis
^{medio} dorso alato-cristatis marginibus
infra medium angulato-productis,

Hab. Mountains of Muthuata, one
of the Feejee Islands, at an elevation
of 2000 feet.

Shrub 10 feet high, glabrous,
stipules fallen, but probably like the
bracts. Leaves membranaceous, 2 to 3 1/2

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inches long, 9 to 18 times broad, oblong-
ovate or ovate-lanceolate with a long
acumination and a cordate base, the
veins rather conspicuous beneath; petioles
an inch or more, or sometimes less, in length,
^{steeper} the upper side with a narrow and more
or less bearded channel. Flowers rather
numerous in a ^{closely} sessile terminal head, in
the bud enveloped in about 3 pairs of
large, ^{round-}obovate, concave, scarious and
chestnut-colored ^{involucral} stipular bracts, making
a globose common flower-bud, deciduous
as the flowers expand. These are sessile,
and apparently ~~not~~ bracteolate, glabrous.
Calyx with a ~~short~~ truncate almost entire
limb much shorter than the turbinate
ovary. Corolla "white", tubular-funnel-
form. 4 or 5 times long, with ^{the} oblong
short lobes, valvate in aestivation. The
materials for the investigation of the bloss-
oms are very imperfect. Upon one
specimen there are one or two expanded
~~flower~~ corollas having 5 or 7 lobes, and
bearing as many almost sessile ~~linear~~

oblong-linear anthers in the throat,
~~which~~ with a villous ring, the extremely
short ^{filaments} ~~anthers~~ also bearded. But ^{young} flower-
buds from another specimen have
the throat and the more manifest fila-
ments glabrous. There is probably a dia-
cious dimorphism in this as in many
other genera of Rubiaceae. Style
filiform, cleft at the summit into 2,
or sometimes 3, slender lobes or stigmas.
Ovary with a solitary ovule erect from
the base of each cell. Immature
drupe 4 lines long, narrowly pyramidal
in the dried state, tipped with ~~the con-~~
~~spic~~ a protuberant epigynous disk
~~surrounded by~~ ^{obscure} ~~and with~~ the ~~obscure~~ limb of the calyx.
Pyrene 2, ovate-lanceolate in outline, ~~of~~
~~a~~ thin, of a cartilaginous texture, flat
on the inner face and with the margins
abruptly angulate. Dilated below the middle,
the back bearing a conspicuous median
wing or strong and sharp crest which

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varishes towards the summit. Seed flat
on the inner face, strongly keeled on
the back. Embryo small, in the
lower part of the hard albumen.

The present and the two following spe-
cies, and probably Plumier's Cephaelis
stipulacea, compose a group which
might technically be referred to to
Cephaelis; but as the involucre
bracts are caducous, no bractlets ap-
pear among the flowers, and the fruit
is like that of some other Oceanic
Psychotria, I think ~~that~~^{it} should be
regarded as a section of the latter
genus, ranking between Bentharn's
section Notopleura and Cephaelis, it-
self hardly to be generically distinguished
from Psychotria. The name of

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the group (from $\pi\pi\tau\omega$ to fall off, and
 $\epsilon\iota\lambda\alpha\upsilon\alpha$, involucrem), alludes to the
deciduous involucre.*

Plate A. Psychotria cordata; ^{bud,} in flower
and fruit. Fig. 1. A flower. 2. Corolla laid
open. 3, 4. Stamens. 5. Pistil. 6. Vertical
section of the ovary. 7. Vertical section
of a drupe. 8. Transverse section of a
drupe. The details all magnified.

~~* § 2~~

* Sect. Piptilerna. Stipulae squa=
maceae, caducissimae. Flores sessiles, capite^{terminali}latis,
ebracteolati; capitulo^{terminali} primarium bracteis squama=
eis caducis involucreto. Pyrena compresso-plana,
costa ~~una~~ dorsali una in cristam alamve
producta, marginibus ~~in~~aeforme subulato-dilatatis. Amen
quasi tripterum.

Sp. Nov. (Tab.)

Psychotria (Piptilerna) Pickeringii.

P. glabra; stipulis caducis; foliis oblongo-
lanceolatis seu ovato-oblongis promissa
acuminatis basi angustata subacu-
tis obtusisve; capitulo arcte sessili
plurifloro bracteis squamaceis cadu-
cis involucreto; calycis limbo brevissi-
mo truncato; corolla tubulosa 4-6-
mera; fructibus ^{obovatis} ~~obovato~~ pyrami-
data obtusis basi quadrangulatis;
pyrenis dorso cristatis et ^{inferne} marginibus
cristatis.

Hab. Orolan, and Sandalwood Bay,
Vanua-levu, Feejee Islands.

A glabrous shrub, with slender spread-
ing branches. Stipules fallen. Leaves
membranaceous, broadly lanceolate or the
wider ones ovate-oblong, 2 to 4½ inches
long, 9 to 15 lines wide, tapering upwards

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into a conspicuous acumination, and
below into a rather acute or barely
obtuse base; veins evident; petiole slender,
3 to 6 lines long. Flowers several,
semite in a closely sessile terminal
cluster or capitulum, which in the
bud is involucre with one or more
pairs of orbicular and concave, mucron-
ate, ^{caducous,} scaly, stipular bracts. Limb of
the calyx very short, truncate, entire.
Corolla tubular, nearly half an inch
long, 4-6 lobed; the lobes short, ovate,
valvate in aestivation; the throat, & gla-
brous. Filaments in the ^{flowers examined} ~~specimens~~,
inserted below the throat, filiform,
glabrous, twice the length of the linear-
oblong anthers. Style filiform, 2-cleft
at the summit. Drupe 3 to 4 or 5
lines long, oblong-obovate in outline, very
obtuse, the lower part 4-angled or
obpyramidal even when soaked. Pyrene
2, ovate or round-ovate in circumscrip-
tion, flat on the inner face and nearly

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so on the back, the middle of which
bears a strong, salient, obtuse or sharp,
crest or wing, while the margins
are wing-like, sometimes for nearly the
whole length, but usually only below
the ~~mid~~ middle, the upper part ab-
solutely contracted. Seed conformed to the
cell, ~~below~~ appearing as if 3-winged, at
least below. Embryo ^{less} scarcely half the
length of the ^{with} hard albumen.

(Fig. 9)

Plate. 13. Psychotria Pickeringii.
foliage and fruit, natural size. 10, Trans-
verse section of a drupe. 11, Longitudinal
section of a drupe. 12, Ventral, and 13,
Dorsal view of a pyrene. 14, Ventral, and
15, Dorsal view of a seed. 16, Embryo. The
details variously magnified.

(Tab.)

Psychotria (Piptilena) platycoeca, sp. nov.

P. glaberrima; stipulis caducis; foliis oblongis utrinque acutis; pedunculis terminalibus demumve lateralibus petiolum adaequantibus glomerulos 1-3 paucifloros bracteis caducis primum involu-
cratos gerentibus; fructibus ovato-tetraquetris; pyrenis dorso et marginibus praesertim inferne acute cristatis.

Hab. Ovolau, one of the Looe Islands.

This differs from the foregoing species in the broader and slightly if at all acuminate leaves (of a firmer texture and with more conspicuous veins, 3 or 4 inches long and an inch or an inch and a half wide, tapering at the base into ^{the} petiole), and by the pedunculate

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inflorescence. The peduncles are half
an inch ~~long~~ long, solitary or 2 or 3
together, ^{terminal} or becoming lateral,
compressed, ^{usually} dividing at the summit into
3 partial peduncles of about 3 lines in length,
^{each} bearing a few ~~flowers~~ subsessile flowers, the
~~cluster~~ ^{small} whole inflorescence and the ~~three~~
separate clusters ~~in the bud enclosed~~
enclosed in the bud by ~~thin~~ ^{a few}
thin and scarious bracts; these are
only 2 or 3 lines long and are early
caducous. Limb of the calyx cupulate,
truncate ^{as long as the prominent epigynous disk} and entire, ^{fully} half the
length of the turbinate ovary. The
developed corolla not seen. Ovary
2-celled, with a single ovule erect from
the base of each cell. Drupe ovate and
somewhat compressed, with 4 ~~salient~~ angles
in the dried state. Pyrene 3 lines
long and of nearly the same width
at the base, somewhat deltoid-ovate
in ~~out~~ circumscription, ~~more~~ very flat,
the margins ^{rather} ~~gradually~~ dilated or wing-

-like downwards, the back bearing a thin and sharp wing or crest about a line in depth.

Plate C. Psychotria
platycoeca. Fig. 17. Foliage and fruit, natural size. 18. Longitudinal, and 19. Transverse section of a drupe. 20. Dorsal view of a pyrena. The anthers magnified.

There are fragments of three or four more, apparently undescribed species of Psychotria in the collection, from the Feejee and Samoan Islands; but they are too imperfect to be safely characterized.

~~In Kuny's collection from Oahu is an undescribed species, probably of Psychotria, but the materials are incomplete.~~

* * Philippenses et Australica.

Psychotria elliptica, Ker.

Psychotria elliptica, Ker. Bot. Vag. 7,
607; Db. Prodr. 4, p. 509; Benth. in
Kew. Jour. Bot. 4, p. 198; non Willd., nec
P. ^{N. B. K.} Reevesii, Wall. ~~Cat.~~ in Roxb. Fl.
Ind. 2, p. 164; Db. l. c. p. 519.

P. Manillensis, Barth. in Db. l. c. p. 522,
ex char.

Gnomicia Reevesii, Hook. & Arn. Bot.
Bech. Voy. p. 193 & 265.

Hab. Luzon; in the mountains near
Baños, ~~not~~ far from Manila.

Clearly the same as the plant of
Hong Kong, Lov Choo, ^{upper} and Indian
species. The specimen is in fruit. When
the albumen is strongly grooved between the
ribs, as in the present specimen, the rumination
is ~~obscure~~ ^{the} more obscure. It varies so much
in this species ~~as~~ to lose all value as a
generic mark.

Psychotria loniceroides, Sieb.

Hab. New South Wales

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*** Brasilienses.

Psychotria alba, Ruiz & Pav.

Psychotria alba, Ruiz & Pav. Fl. Per.
2. p. 58, t. 105; Ob. Prodr. 4, p. 508;
Schlecht. in Linnaea, 28, p. 504

Hab. Brazil, near Rio Janeiro;
the var. tonsa. ~~There is Feejee Islands?~~

There is in the ~~Oceanic~~ Polynesian collection a small specimen, with mostly unexpanded flower-buds, recorded as from Nannak-leva, one of the Feejee Islands, which in all respects accords with ~~these~~ the P. alba from Brazil. It equally has slender filaments longer than the anthers and the style ~~2-cleft at~~ more ~~two-~~ two-cleft than is usual. It ~~appears~~ seems ^{more} ~~as~~ probable that the specimen may have been transposed, ^{than} ~~as~~ that this American species should occur ⁱⁿ ~~from~~ a distant group of South Sea Islands.

2. Psychotria leiocarpa, Cham. & Schlecht.

Psychotria leiocarpa, Cham. & Schlecht. in
Linnaea, 4, p. 22; Ob. l. c.; Schlecht.
l. c. (Mart. Herb. Bras. no. 112;

Hab. Brazil, in the Organ Mountains,

251
3. Psychotria apocynifolia, sp. nov.

P. glaberrima; foliis oblongis seu lanceolato-oblongis utrinque acutis vel acuminate breviter petiolatis membranaceis concoloribus, venis primariis tenuibus angulo fere recto patentibus prominulis; stipulis brevissimis triangulatis, summis integris, ceteris bipartitis; cyma terminali pedunculata laxiflora, foliis brevioribus; bracteis minimis subulatis; calyce obtuse quinque dentato; corolla infundibuliformi extus scabriuscula intus faucibus tantum pilosa; stylo hirtello.

Hab. Brazil, near Rio Janeiro.

Very smooth and glabrous throughout. Branchlets nearly terete. Leaves in shape and appearance not unlike those of some forms of Apocynum cannabinum, but of nearly the same

membranaceous,

Bright green color both sides, (2 1/2 to 3 1/2 inches long, an inch or rather more in width, narrowly oblong or lance-oblong, acuminate, acute at the base, on a petiole of one or two lines in length, the primary veins 10 or 12 pairs, slender but rather conspicuous, transverse, and slightly curved upwards; the reticulated veinlets inconspicuous. Stipules shorter than the petioles; the uppermost triangular and entire between the petioles, the lower subulate-triangular and two on each side, deciduous. ~~Byrne terminal, many-flowered,~~ shorter than the uppermost leaves; the peduncle (half an inch long), and ~~the~~ ^{its} trichotomous or verticillate branches slender, slightly compressed, the alar flowers sessile; the lateral pedicelled. Flowers about 3 lines long. Calyx short; the cupulate limb obtusely 5-toothed. Corolla funnel-form, a little purplish outside; the oblong lobes more than half

the length of the tube, inappendiculate, the throat villous at the insertion of the stamens but not elsewhere. Filaments shorter than the oblong-linear anthers. Style beset for nearly its whole length with very short hairs, two-cleft at the apex; the stigmas dilated, ~~obscure~~ thickish, roundish, and somewhat 3-lobed. Ovary 2-celled, with a solitary ovule erect from the base of each cell. Fruit unknown.

If I mistake not, this is the same as ~~Gardner's~~ (no. 5492 of Gardner's Brazilian collection, which, however, I do not possess for present comparison. ~~But~~ It resembles, but is not identical with a specimen of Gardner's from the Organ Mountains, communicated by the late Mr. Fielding, without a number, and which has ~~rather narrow~~ an almost entire calyx ^{and} a rather narrower corolla, the lobes of which are ~~short~~ appendaged or

saccate, ^{behind} ~~on the back~~ just below the apex, and the style is glabrous, the stigmas slender. Neither of these can well be the *P. nitidula* of Chamisso and Schlechtendal, ~~although~~ although evidently ~~related~~ related to it.

4. *Psychotria pallens*, Gardn.

Psychotria pallens, Gardn. in ^(Hook.) Lond. Jour. Bot. 4, p. 108.

Hab. Brazil, in the Organ Mountains.

5. *Psychotria stachyoides*, Benth.

Psychotria stachyoides, Benth. Pl. Negrell. in Linnaea, 23, p. 464.

Hab. Brazil, in the Organ Mountains.

b. Psychotria hancorniaefolia, Benth. l.c.

Hab. Brazil, in the Organ Mountains,
and near Rio Janeiro.

There remain three or four specimens
~~of different~~ apparently of as many
species of Psychotria, which are
probably ~~undescri~~ unpublished if they
really belong to this genus; but the
print of all of them is unknown, and
the materials are too imperfect for
safe and useful description.

283
Palicourea, Aublet.

1. Palicourea Marcgravii, St. Hil.

Palicourea Marcgravii, St. Hil. Pl. Rem.
Mss. p. 281, t. 22; Db. Prodr. 4, p. 525.

Hab. Organ Mountains, Brazil, near
Rio Janeiro. (Stipules quadrifid.)

Faramea, A. Rich.

1. Faramea stipulacea, Db.

Faramea stipulacea, Db. Prodr. 4, p. 497.
Tetramerium stipulaceum, Cham. & Schlecht.
in Linnaea, 4, p. 31.

Hab. Brazil, in the Organ Mountains,
near Rio Janeiro.

2. Faramea caudata, Gardn.

Faramea caudata, Gardn. in Hook. Lond.
Jour. Bot. 4. p. 108; Benth. in Lin-
nea, 23, p. 454.

Hab. Brazil, in the Organ Mountains.

3. Faramea colorata, Benth. l.c.

Hab. Brazil, in the vicinity of Rio Janeiro.

4. Faramea nemoralis, Mart.

Faramea nemoralis, Mart. Herb. Fl. Bras.
 no. 610; Benth. l.c. p. 451.

Hab. Organ Mountains, Brazil.

5. Favamea contracta, Walp.

Favamea contracta, Walp. Rel. Meyer,
p. 351; Benth. l.c. p. 448.

Stat. Organ Mountains, Brazil.

There are ^(specimens) ~~fragments~~ of another
Favamea from the Organ Mountains,
with small sessile leaves, ~~and~~ long-
aristate stipules, and small calyx-
teeth; but the materials are too incom-
plete for ~~descriptive~~ determination
or description.

b. Favamea sessiliflora, Rehl.

Stat. Vicinity of Rio Janeiro, Brazil.

Rudgea, Salisb.

1. Rudgea lanceolata, Benth.

Rudgea lanceolata, Benth. in Linnaea,
23, p. 455.

Coffea lanceolata, Cham. & Schlecht.
in Linnaea, 9, p. 232.

Psychotria sessilis, Vell. Fl. Flum.
2, t. 26.

Hab. Brazil, in the Organ Mountains,
near Rio Janeiro.

2. Rudgea nodosa, Benth.

Rudgea nodosa, Benth. in Linnaea, 23,
p. 457.

Coffea nodosa, Cham. & Schlecht. in
Linnaea, 9, p. 233.

Hab. Brazil, in the vicinity of Rio Janeiro.

(A fragment, with young fruit.)

3. Rudgea macrophylla, Benth. ^(l.c.)

Hab. Brazil, in the Organ Mountains,
near Rio Janeiro. (Flowers fallen,
Leaves a foot and a half long.)

A fragment of another species occurs
in the ^(Brazilian) collection, possibly a form of
R. reticulata, Benth.; but insufficient
for determination.

Uncaria, Schreb.1. Uncaria Gambir, Roxb.

Hab. Singapore. (Furnishes one of the sorts of catechu in commerce.)

Nauclea, Linn.1. Nauclea calycina, Bartl. in DC.

Nauclea orientalis, Forst. Prodr. p. 15?
non Linn.

N. rotundifolia, Guill. Reph.
Jart. p. 50? vix Bartl.?

Hab. Tahiti, Society Islands.
Savai and Manua, Samoan Islands.

The specimens are much too imperfect for proper determination, and also variable in the shape of the leaves; but they can hardly belong to N. rotundifolia, Bartl. to which

Grillenium ~~referred~~ Doubtfully re-
ferred (~~Forster's~~ plant). At least
the young flowers of a specimen
collected by Moerenhout have
the slender, clavate calyx-lobes
of DeCandolle's section Pentacoryna.

Manettia, Antis.

1. Manettia fimbriata, Cham. & Schlecht.
2. Manettia multiflora, Cham.

Ital. Near Rio Janeiro a single
specimen of each of these species was
collected.

Alseis, Schott.1. Alseis Miersii, Benth. ined.

Itab. Organ Mountains, near Rio Janeiro, Brazil.

A solitary specimen, in fruit. Compared with Endlicher's figure of the original species ^(in flower), it appears to differ only in the copious soft pubescence.

Noigtia, Klotzsch.1. Noigtia australis, Klotzsch.

Noigtia australis, Klotzsch "in Stagne, Anzeig. 14, t. 15, adn."; Walp. ~~Reper.~~ Reper. 6, p. 68.

Exostemma australe, St. Hil. Pl. Us. Bras. 1, t. 3; Sb. Prodr. 4, p. 361.

Itab. Brazil, near Rio Janeiro: also foliage, apparently of the same but glabrous and shining above, from the Organ Mountains.


Coutarea, Publ.

1. Coutarea speciosa, Publ.

Hab. Rio Janeiro, Brazil.

De Candolle and Endlicher omit to state (as Publet and other early authors do) that the corolla is curved or unequally ventricose in the bud. Endlicher, so far as I know, is the first to mention the aestivation of the corolla, and he gives it incorrectly, viz. as imbricate; hence ^{Rank's} ~~includes~~ the genus among those with valvate or modified valvate aestivation; whereas ~~the aestivation~~ it is truly imbricative, although the tube is somewhat fluted. Moreover, in C. Mexicana, R. & C. (if to this belongs Boulet's no. 225 from Rimassan), the flowers are (at least sometimes) pentamerous.

* Bikkia grandiflora, Reinw., or
B. australis, DC., or more properly,
B. tetrandra (Portlandia tetrandra,
Forst.) appears not to have been col-
lected in the Expedition, but Prof.
Harvey obtained fine specimens of
this ~~hard woody~~ ^{shrubby} ~~plant~~ ^{various} at the Friendly
Island. As the aestivation of the cor-
olla has not been recorded, I may
state that it is valvular, as in
Portlandia, but strongly redupli-
cate, so that the short limb of the
corolla in the bud is ~~strong~~ cruci-
ately ^{angled or} four-winged. The stigma is
bilamellar, the lobes short, oblong,
and thickish. Ovules oblong, hori-
zontal. Immature seeds with the
testa conformed to the nucleus.

link, Ernst  912
My/My-sister

Badusa, N. Gen.

Calyx tubo clavato; limbo brevi
 cupulato 5-dentato persistente.
Corolla hyprocraeterimorpha, ^{glabra,} ~~5-fida~~; ^{5-fida};
 limbo tubum adaequante, lobis
 lineari-oblongis aestivatione contor=
 to-imbricatis (uno exteriori), explica=
 tis patenti-recurvis. Stamina 5,
exserta: filamenta filiformia,
 ima basi corollae inserta, inferne
 villosa; antherae lineares, dorso
 paullo supra basim ^{maximè} affixae, ^{versatiles};
Stylus filiformis longitudine sta=
 minum, ramis² brevibus cum
 stigmatibus subcapitatis intus
 planis in clavellam ^{angulatam} congluti=
 natis. Ovarium biloculare.
Ovula in placentis lineari-oblan=
 gis crassis, dissepimento utrinque
 insertis, plurima, anatropa, ^{rese} im=
 bricantia, superiora adscendentia,

inferiora pendula. Capsula
 clavato-oblonga, ^{cartilaginea,} bilocularis, polysper-
 ma, ab apice ad basim septicida.
 semina ovalia, modice alata.
 Embryo ^{rectus,} albumini carnosio ~~pa-~~
 paullo brevior; radicula tereti
 cotyledonibus ovatis longiore.
 — Frutices sempervirentes? gla-
 bri, Oceanici; stipulis brevibus vagi-
 natis; pedunculis axillaribus apice
 foliatis cymoso-plurifloris; floribus
 albis.

This genus is founded upon the
Binchona corymbifera of Forster, B.
Philippica of Cavanilles, and specimens
 gathered at the Feeje Islands in this
 expedition, as also at the Friendly
 Islands by Professor Harvey, — all
 probably belonging to one species.
 From ^{genuine} Exostema, to which ~~Roemer~~
 and Schultes and afterwards de Ban-
 dola referred them, they are distin-

quished by the convolute-imbricate
~~ed aestivation~~ = five aestivation of the
 corolla, as well as ^(the versatile anthers, the) ~~by~~ inflorescence
~~and habit~~. In Neddell's artificial
 analysis this genus would stand next
 to Cosmibuena*. — If a plant of
 which the genus is named in
 memory of Sebastian Badus, a
 Genoese physician, who, in a work
 published A.D. 1663, ~~first~~ ~~estimation~~
 was the first to write upon the
 botanical history of Peruvian Bark.

1. Badusa corymbifera.

B. foliis oblongo-lanceolatis seu
ovato-oblongis utrinque acutis
petiolatis; supra lucidis; pedun-
culis multifloris folio paullo
brevioribus.

Var. a. pedicellis etc. glaberrimis;

* But the anthers of B. acuminata, though described as linear, are
 barely oblong in the figure of Ruiz & Pavon.

Cura posterior. The characters
 of Badusa having been published, in
 the Proceedings of the American Academy of
 Arts and Sciences, 4, p. 308, I am unwilling
 to cancel the genus. But it must be
 remarked that, having now the oppor-
 tunity of examining the flowers of ~~four~~
~~species of~~ Exostema caribaea, longiflora, &
 and a Mexican species closely
 related to E. Peruvianum, I find that
 their corolla is not valvate in aestivation,
 nor of the valvular type, as Neddell
 (probably following Klotzsch) supposed.
 The aestivation is decidedly quinque-
 imbricated. Therefore it may be doubted
 whether the dorsifixed and more or less ver-
 satile (instead of the strictly basifixed
 or innate) anthers will ought to sepa-
 rate Badusa from Exostema as any-
 thing more than a section. (Jan. 1861.)

calycis limbo 5-fido.

Binchona corymbifera, Harst. in
Act. Ups. 3, p. 176, & Prodr. p. 15;
Linn. f. suppl. p. 144; "Lamb.

Binch. p. 25, t. 5"
C. (Exostemma) corymbifera, Pers. Syn. 1, p. 146.
Exostemma corymbiferum, Roem.
& Schult. Syst. 5, p. 20; DC. Prodr. 4,
p. 360.
Binchona Philippica, Cav. Ic.
4, t. 329?

Exostemma Philippica, Roem. &
Schult. l.c.?

Var. β. Nitensis: pedicellis etc.
primis puberulis; floribus
minoribus (semipollicaribus);
calycis limbo brevior cupula-
to leviter 5-dentato.

Hab. Muthuata (and Ovolau),
Feeje Islands.

(Feeje specimens are said to belong to
This is said to be a handsome.

white-flowered shrub, 10 or 20 feet high. The leaves vary from 3 to 5 or 6 inches long, and from one to two inches in width; they are subcoriaceous, smooth, and apparently bright green both sides. Petioles 3 to 9 lines long, stipules short, combined into a truncate and bidentate sheath; those of the uppermost ^{or floral} leaves small, nearly distinct, and deciduous. Peduncles axillary, slender, compressed, usually more than half the length of the leaves, rarely almost equalling them, bearing a small cyme of numerous crowded flowers, subtended by a pair of small leaves; the bracts at the secondary divisions also commonly foliaceous. Pedicels crowded, 2 or 3 lines long, in the present plant mostly minutely pubescent, at least when young, as also is the ~~calyx tube and~~ tube

of the calyx and the corolla in bud,
 in a slighter degree. Ovary or
 calyx-tube clavate, 2 lines long,
 crowned with a very short, cup-like,
 spreading, or obscurely 5-dentate
 limb, the height of which ~~hardly~~
~~equals~~ is rather less than the
 breadth of the ~~ovary~~ summit of
 the ovary; this is persistent on the
 capsule. Corolla in bud half
 an inch long, then clavate,
 contorted-imbricate in aestivation,
 one lobe being wholly exterior and
 one wholly interior; the lobes in
 anthesis ^{narrowly oblong or} linear-oblong, recurved-
 spreading and ^{glabrous,} equalling the tube
 in length, obtuse, the upper face
 lightly one-nerved. Stamens in all
 the specimens inserted into the very
 base of the ~~corolla~~ tube of the corolla,
 as in the figure of *Caranilla*, or
 even free from it and epigynous.
 Filaments filiform, as long as the

corolla, villous-pubescent below
 the middle. Anthers linear, about
 3 lines long, attached a little above the
 bifid base, at length becoming ^{more or less}
 transverse or versatile, glabrous; the
 cells closely parallel and acute
 at the base. Style as long as
 the stamens, very slender, clavellate-
 thickened and 4-6-angled at the sum-
 mit, but a ^{on each side} groove indicating that
 it is here composed of two branches
 which are closely soldered together;
 after maceration they may general-
 ly be separated, not without some
 force: the semi-capitate stigmas
 also coherent. Ovary, 4s. as in
~~the~~ allied plants; the placenta
~~tapering to~~ as long as the cell,
 tapering to each end. Ovules more
 or less imbricated, ~~the~~ fixed by one
 end, the upper ones ascending, the
 lower pendulous. Capsule 4 or
 5 lines long, smooth and even, of a

firm or cartilaginous texture, septi-
 cidal from the apex. Seeds ^{rather numerous,} oval or
 oblong, a line and a half in length,
 compressed parallel to the placenta,
 with a roughish-reticulated testa,
 and surrounded by a wing, which
 is narrow on the sides but ex-
 tended to the length of the nucle-
 us at one or both ends. Embryo
 slender, but nearly the length of
 the soft fleshy albumen.

The specimens which Professor
 Harvey gathered at Navarre I
 take to be ~~Forster's~~ the same as
 Forster's (our var. a.); and it also
 accords well with the figure of
Binchona Philippica, var. (ex-
 cept that the ~~capsule~~ capsule is not
 quadrangular (~~probably~~ as that of
 the latter is represented, perhaps ex-
 ceptedly, as it is not so described
 in the latter-men). The flowers
 are nearly one third larger, and

the ~~limb~~ of the calyx is more conspicuous and more strongly toothed or cleft. Still I cannot regard the Feejee plant as specifically distinct.

I have a specimen, in flower only, of a plant ticketed "Conchona contorta, Hook., Prince of Wales Island" (which island of that name?) which, if the fruit and seeds agree, would be referred to the present genus. The corolla is completely contorted in aestivation, and the anthers are sparsely hispid.

Dolicholobium. n. Gen.

Calyx tubo cylindrico elongato;
 limbo amplo ^{submembranaceo} cyathiformi
~~sen crateriformi~~ truncato
 integerrimo rariusve sub-
 lobato persistente. Corolla
 hypocraterimorpha; limbo ⁴⁻⁵/₅-
 partito, lobis oblongis obtusis-
 simis plurinerviis aestivatione
 contortis. Stamina ⁴⁻⁵/₅, tubo
 infra faucem inserta, glabra, ^{inclusa} ~~in~~
 filamenta brevissima; antherae
 lineares, basifixae, adn ~~in~~ ⁱⁿtror-
 sum adnatae. Stylus bi-
 fides, ramis subspathulatis
 sursum petaloides dilatatis
 intus secus costam stigmato-
 sis. Ovarium biloculare, ~~2~~
 Ovula in placentis elongatis
 crassis numerosissima, minuta,
~~intricata~~

sursum imbricata, acicularia,
 Capsula siliquaformis, teretia,
 longissima, calycis limbo cra-
 teriformi (^{seu pateriformi} fructu multoties latiori)
 plerumque coronata, demum
 septici-da? Semina numer-
 osissima sursum creberrima, ~~im-~~
~~sursum imbricata~~, nucleo ovali,
 ala angusta utrinque in eandem
 simplicem longissimam ^{sensim} atten-
 uata. Embryo in albumine
^{parvo} carnosus rectus, cotyledonibus ova-
^{li} tis radícula infera ~~parva~~
 parum brevioribus. ~~Arbus-~~
~~cule vel~~ Frutices Vitienses;
 foliis membranaceis ^{petiolatis} ~~obtusis~~ recte
 penninerviis, venulis pulchre
 reticulatis; stipulis interpetio-
 laribus ^{membranaceis} ~~sub~~ foliaceis distinctis
 obtusis planis plerumque ca-
 ducis; pedunculis brevibus ex
 axillis superioribus tri-pauci-
 floris; ~~calycis tubo corollae~~ flori-
 bus majusculis ~~altis~~, tubo

Sp. Nov.
1. Dolicholobium oblongifolium (Tab.)

D. foliis oblongis seu elongato-ob-
longis utrinque acutiusculis
(2½-5 poll. longis); flore pentamero.

Hab. ^(Mbra or Mountains near) Sandal-wood Bay, Nanna-
leve, Feejee Islands; where it was
~~also~~ ^{likewise} collected by Mr. Milne, in blo-
som, as also on Viti-leve, in 1858.

The Naturalists of ~~our~~ ^{your} Expedi-
tion gathered ²⁰⁰⁰ printing specimens
of this shrub, with barely the re-
mains of a flower or two. ~~I am~~
~~to~~ Flowering specimens were recent-
ly gathered by Mr. Milne, in the
voyage of the British surveying ship
Herald. These have been kindly entrus-
ted to me by Sir Wm Hooker, and
have enabled me to complete the
characters of an interesting bin-
choraceous genus. The leaves

vary from $2\frac{1}{2}$ to 5 inches in length,
 and from broadly to narrowly oblong;
 they are membranaceous, more or
 less acute at the base and mostly
 rather acuminate at the apex,
 glabrous above, and also beneath
 in Milne's specimens; but in ours
 the midrib ^{sometimes} ~~and more~~ sparingly,
 the ^{main} veins of the lower surface retain
 more or less of the appressed hirsute
 pubescence which occurs on the
 nascent foliage and the shoots.
 Primary veins ^{8 to 13 pairs,} straight and rather
 conspicuous, simple; the veinlets ~~all~~
 minute and of uniform size, forming
 fine, transverse areolae. Petioles 6 to 9
 lines long. Stipules mostly de-
 ciduous from our specimens, ~~but~~
 but remaining on some of Milne's,
 where they are an inch or even
 an inch and a half in length, mem-
 branaceous-foliaceous, oblong, entire,
 distinct, at first silky-pubescent,

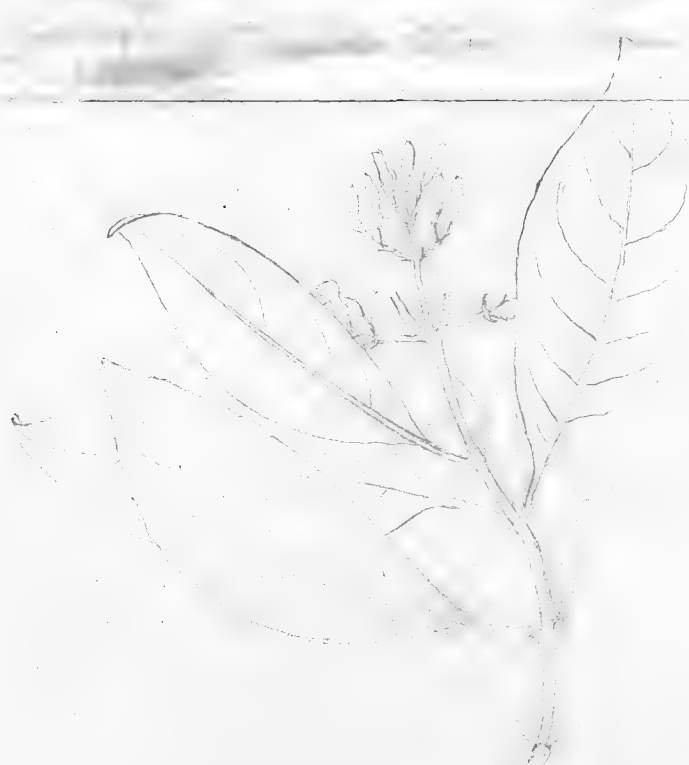
at length glabrous, somewhat striate-nerved. Peduncles ~~short~~ axillary or terminal, commonly not longer than the petioles, 3-5-flowered; ~~hirsute-pubescent~~ pedicels short. Calyx-tube and ovary 8 or 9 lines long, slender, hirsute-canescens; crowned with an expanded, cyathiform, greenish, membranaceous limb, 2 or 3 lines in length, which is truncate and entire, or sometimes irregularly or obscurely repand-toothed or lobed, ~~ciliate~~ hirsute-ciliate. Corolla apparently white, pubescent externally, especially the tube, which is ^{9 or 10 lines long,} ~~longer~~ cylindrical, slender, much narrower than the limb of the calyx, glabrous within; the limb 5-parted, rotately spreading; lobes narrowly oblong, obtuse, marked with several delicate parallel veins, contorted in aestivation, when expanded

about ~~as~~ long as the tube.
 Stamens 5, inserted toward the
 summit of the tube, glabrous;
 filaments very short; anthers
 linear, ^{included,} obtuse at both ends, the
 narrow cells apposite and parallel,
 adnate to a narrow connective,
 introrse. Style shorter than
 the stamens, 2-cleft almost to
 the middle; the divisions flat
 with a ~~thickened~~ ~~axis or~~
~~midrib~~ thicker centre, petaloid.
 dilated ^{upwards} or alate, stigmatic
 from near the apex downward
 on the middle of the inner face.
 Ovary 2-celled. Ovules innum-
 erable, upwardly imbricated on
 the long and thickish placenta,
 scabiform. Capsule 4 or 5
 inches long, hardly above 2 lines
 in diameter, cylindrical, minutely
 pubescent or sometimes glabrate,
 crowned with the ^{subfoliaceous} ~~large~~ limb of the

calyx, which however ⁱⁿ some cases falls away before maturity; the epicarp somewhat herbaceous; the endocarp ~~thin~~ cartilaginous, not thin. Seeds closely packed for the whole length of the cells on the placenta; the nucleus about half a line long, with a thin, ^{muriculate} rugose-reticulated testa, barely surrounded by a scarious wing, which tapers ^{gradually and} nearly equally at both ends into a subulate appendage, the whole ~~about 2 to~~ 3 or 4 lines in length. Embryo nearly the length of the scanty and soft-fleshy albumen: radicle inferior, about the length of the ovate cotyledons.

Plate Dolicho
~~bracteolatum~~ folium oblongi-
folium; a fruiting branch. Also, Fig. 1, a flowering branch, with the stipules, from Herb. Hook., collected in the cruise of the Herald. 2. Gynia, laid open, and an imperfect? style; the flower probably sterile. 3. Dorsal, and 4. Ventral, view of a stamen. 5. Gynia, laid open, and style of a fertile flower, the anthers reduced in size. 6. One of these anthers detached. 7. Summit of the bilamellar style of fig. 5, more magnified. 8. The whole style, with the epigynous disk. 9. Portion of ^{an ovary} ~~a capsule~~, with a transverse section. 10. Longitudinal section of the summit of an ~~capsule~~ ^{ovary}. 11. An ovule. 12. Transverse section of a capsule. 13. Longitudinal section of the summit of a capsule. 14. A seed. 15. The same more magnified, with the nucleus divided to show the embryo. - The details all magnified.

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2. Solichnolobium latifolium, sp. nov. (Tab.)

I. foliis latissime obovatis basi
rotundatis vel obtusissimis (5-7
poll. longis); flore tetramero.

Tab. Orolan, Feeje Islands.

A single specimen ^{exists} ~~occurs~~ in the collection, with full grown fruit, and a loose tetramerous flower, which probably belongs to the species. • The leaves are much larger than in the preceding species, as well as of a ~~different~~ different shape, and the petiole, midrib, and veins more silky-hirsute; the venation similar. Capsule similar, but more hirsute, 5 ^{or 6} inches long, crowned with a crateriform limb of the calyx which is half an inch in diameter. Seeds, &c. as in the preceding species. The

detached corolla (of which sketches had been made by Mr. Rich) is evidently of this genus. At least, it differs from that of D. oblongifolium merely in its larger size (the tube fully an inch in length), and in having only four, proportionally rather narrower segments; the anthers also a little longer. Dr. Pickering refers to the plant in his notes, as a shrub, 10 feet high, with a quadrifid corolla.*

Plate

Dolicholobium latifolium

folium; in fruit. Fig. 1. Section of a part of the capsule. 2. A seed. 3. The same with the nucleus divided, showing the embryo. 4. The embryo detached. 5. A detached corolla, mentioned above, ^(of the natural size) 6. The same laid open. 7, 8. Anthers. ~~The details~~

* Dolicholobium longissimum of Dr. Seemann, (no. 215) in the list of his Feejeean collection, is perhaps a good species, but ~~the~~ with the leaves narrower than in D. latifolium and downy beneath; but better specimens of both are needed to settle the point.

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Gardenia, Ellis.

1. Gardenia Taitensis, DC.

Gardenia Taitensis, DC. Prodr. 4.

p. 380; Guill. Rept. Tait, p. 51

G. florida, Forst. Prodr. p. 20, non L.

Hab. Tahiti, Fongatapu, Futuila, Disappointment Island; in blossom. Vanna-levu, ~~Disappointment~~ Feejee Islands; a small-leaved form, with mature fruit.

The vertical, foliaceous calyx-lobes, only 3 or 4 in number (or when five, two of them abbreviated), and much shorter than the tube of the ^{5-8-lobed} corolla, distinguish this species.

If the Feejean specimens also belong to ~~this~~ it, ^(the calyx &c. being similar) as is ^{not} probable, the mature fruit is spherical and about two-thirds of an inch in diameter. But the corollas of this, and the fruit of the ^{ordinary} ~~Tahitian~~ plant are unknown.

The G. Taitensis, moreover, is unfortunately named; for it is not indige-

now to Tahiti, but was probably introduced from the Friendly or Navigators' Islands.*

Randia, Host.

1. Randia ferox, DC.

Stat. Organ Mountains, near Rio Janeiro, Brazil.

* Seemann's Gardenia Vitiensis, although in foliage resembling our Tree an ~~specimen~~ plant, is very different in the flower, being closely related to G. Thunbergia.

Tocoyena, Aubl.1. Tocoyena hirsuta, Moric.

(in Ob. Prodr. 4, p. 325, ff.)
Tocoyena hirsuta, Moric. Pl. Amer.
 t. 56; Mart. Herb. Bras. p.
 321.

Hab. Brazil, near Rio Janeiro.2. Tocoyena bullata, Mart. l.c.Hab. Brazil, in the Organ Mountains.Posoqueria, Aubl.1. Posoqueria revoluta, Nees.Hab. Rio Janeiro, Brazil.

Sabicea, Aubl.

- 1.
- Sabicea eriantha
- ,
- Ab.

Hab. Rio Janeiro, Brazil, (in blossom.)Coccocypselum, Swartz.

- 1.
- Coccocypselum aureum
- ,
- Cham.
- &
- Schlecht.

- 2.
- Coccocypselum nummularifolium
- ,
- Cham.
- &
- Schlecht.

- 3.
- Coccocypselum cordifolium
- ,
- Nes & Mart.

- 4.
- Coccocypselum montanum
- ,
- Mart.
- ?

Hab. Brazil: specimens of these four species (the latter doubtfully named) were gathered near Rio Janeiro, or ~~near~~ in the Organ Mountains. The first is probably C. dichrocladium, Mart.; the last is the same as Miers' no. 4126, and perhaps an undescribed species.

Mussaenda, Linu.1. Mussaenda frondosa, Linu.

Hab. Tutuilla and Manua,
 Navigators' Islands. Orolau,
 Sonn-Sonn, &c. Feejee Islands;
 both glabrate and soft-downy forms.

Apparently not different from
 the East Indian species, which is
~~q~~ very variable. Doubtless the same
 as Forster's M. frondosa from Tahiti;
 in the forests of which our natural-
 ists noticed a Mussaenda, but
 without flowers or fruit; wherefore
 no specimens were gathered. The
 mucronate tips of the lobes of the cor-
 olla vary in length. The aestivation
 of the corolla in this genus is
 probably well known, but is not
 mentioned in systematic works. It
 is ^{valv}valvate and unusually strongly repli-
 cative, the folds either straight and
 salient or sometimes plicate-twisted.

Stylacoryne, Car.

1. Stylacoryne Mebera, A. Rich.

Hab. Small island in the Sooloo Sea.

The elongated-clavate stigma, in this as in other species of the genus, is separable into two divisions, which are rather conglutinate than connate.

2. Stylacoryne pambucina

St. foliis oblongo-ellipticis seu lanceolato-oblongis utrinque acutis acuminateve longiuscule petiolatis submembranaceis cum ramis quadrangulatis glabris, venis primariis 14-18 perspicuis; stipulis late triangulatis; cyma terminali decomposita in pedunculo com-

mini brevi densiflora; calycis
obovato-oblongi dentibus brevissimis
rotundatis ciliolatis;
Corolla griseo-pubera, lobis
angusto-oblongis obtusissimis
tubum adaequantibus, fauce
nuda; bacca globisphaerica
10-16-sperma.

Coffea sambucina, Forst. Prodr.
 p. 16; Spreng. Pugill. 1. p. 16.
Chiococca sambucina, Spreng. Syst.
 Veg. 1. p. 756.

Parvella sambucina, DC. Prodr.
 4. p. 492.

Stylacoryne pepericarpa, Benth.
 in Hook. Lond. Jour. Bot.
 2. p. 223.

Hab. Tutuila and Manua,
 Suva or Navigators' Islands;
 Tongatabu; Ovalau and Nannu-
 levu, Feejee Islands; Tahiti and
 Matia, Society Islands, in mountain
 forests.

I believe this to be Forster's
Coffea sambucina, ^{from the Tonga or Feejee Islands,} and have there-

fore adopted that specific name. One of its forms with thinner leaves and smaller fruit than others, is ~~Benthania~~ gathered by Mr. Skind at the Feeje, and by Mr. Barclay at the Friendly Islands, is Benthania's Stylocoryne pericarpa. Prof. Harvey also found it, in fruit, at the Feeje Islands. - It is a shrub or small tree, glabrous except a slight canes-
 cence of the young ^(quadrangular) branches and inflorescence. Leaves 4 to 8 inches long, and from $1\frac{1}{4}$ to $3\frac{1}{2}$ inches wide, on petioles of an inch or less in length; the straightish primary veins pretty conspicuous beneath, especially in the thinner-leaved specimens. Stipules short, and broadly triangular, acute, deciduous. Flowers very numerous in a sessile and trichotomous, or a short-peduncled and several decomposed cyme; the ultimate divisions crowded and fastigate. ~~Limb~~ Calyx less than a line in length; the limb very short, not

larger than the breadth of the
 summit of the ovary, ~~5-lobed~~,
 rather deeply cleft into 5 broad
 and very obtuse teeth, Corolla
 woody with a fine ^{very} ~~fine~~ ^{appressed} pru-
 bescence; the tube 2 or 2 1/2 lines
 long: the lobes about the same
 length, narrowly obovate-oblong
 or spatulate-oblong, very ~~obtusely~~
 obtuse, convolute in aestivation;
 the throat glabrous or nearly so,
 i.e. destitute of the beard of S.
Webera, &c. Filaments very short;
 anthers linear, with an acutely
 sagittate base. Style that of
 the genus, exserted, the stigma
 at length bipartite. Ovary 2-lobed,
 the cells pluriovulate. Fruit a
~~spherical~~ spherical berry, of the
 size of a peppercorn or a little
 larger, ripening from 10 to 16 an-
 gulate seeds. Albumen hard-
 fleshy.

3. Stylocoryne Coffeoides.

Cl. Herba glaberrima; foliis subcori-
aceis ovato-sen elliptico-oblongis
acuminatis basi acutis breviter
petiolatis supra nitidis; ~~venis~~
~~primariis 10-15~~ subtus perspicu
stipulis triangulatis acuminatis
caducis; cymis axillaribus (ter-
minilibusque laxifloris folio
multo brevioribus; calycis lim-
bo brevissim~~o~~ truncato dentic-
ulato; corolla glabra, lobis
5 oblongis obtusis tubum ad-
equantibus, fauce hirsutissima;
bacca sphaerica polysperma.

Stylocoryne racemosa, Hook. &
Arn. Bot. Beech. p. 64, non
bar.

Coffea odorata, Forst. Prodr. p.
16? DC. l. c. p. 500?

Ixora odorata, Spreng. Syst.
Neg. 1, p. 409, ex char.

Itab. Upolu, one of the Samo-
an or Friendly Islands (also Navau

and Lifuka, Prof. Harvey). Tahiti,
Society Islands.

Branches nearly terete, very
glabrous, as is the whole plant.
Leaves varying from ovate to lan-
ceolate-oblong, 3 to 6 inches in length,
of a firm texture, but hardly cori-
aceous, smooth and shining above,
dull beneath, the base contracted
into a petiole of 3 or 4 lines in
length. Stipules ~~pointed~~ entire, point-
ed. Cymes axillary (and sometimes
also terminal), on very short pedun-
cles, rather small, about half
the length of the leaves, at length
bifurcate or divaricate and loosely-
flowered: pedicels slender, 2 to 4
lines long. Calyx ovate, with
a short and cup-like, truncate and
barely 5-denticulate, persistent limb.
Corolla white, in bud half an
inch long, externally very glabrous,
the lobes oblong or elongated oblong,
obtusely, convolute in aestivation,
rather longer than the tube; the
throat ^{densely} conspicuously bearded with

longer and more hirsute hairs than is common in the genus. Anthers on short filaments, elongated-linear and acute. Style not longer than the anthers or the lobes of the corolla, the clavate and acute summit separable into two plano-convex, linear-nubulate lobes. Ovary 2-celled. Ovules numerous, closely packed on an oblong placenta. Fruit a globose berry (in spec. coll. Harvey), about 3 lines in diameter, ripening from 6 to 20 seeds. Seeds horizontal, depressed, somewhat angled; the testa nearly smooth. Embryos small and slender, in hard albumen.

In habit this differs considerably from the foregoing species; but it is clearly of this genus. I think it cannot be the Stylocyne racemosa of Baranilles, which came from Manila, the ~~the~~ calyx of which is described

and figured as pretty strongly 5-toothed, &c. Certainly it is not plant described by Hassk. in his Retzia, which may well be ~~that~~ the same as that collected by Charles Wright in the Looe-Heer Islands. I suspect our plant to be Horst's *Coffea odorata*, although the leaves can hardly be called ovate. But Sprengel's diagnosis, apparently drawn from an original specimen well applies to our specimens. All the flowers examined are ~~pentamerous~~ pentamerous.

Professor Harvey found an allied species in the Feejee Islands, of which the characters are subjoined.

* *Stylocoryne Harveyi* (sp. nov.); glaberrima; foliis chartaceis oblongis acuminatis basi in petiolum longiusculum contractis; cymis axillaribus terminalibusque petiolum vix superantibus subsessilibus; calycis ~~lobis~~ limbo quadripartito, lobis triangularibus subulatis tubo vix

brevioribus; corollae lobis 4 lineari-oblongis tubo longioribus, fauce imberbi. — Leaves 4 to 5½ inches long, 1¼ to 2 inches wide, dull; petioles of the larger leaves an inch long. ~~Flowers rose.~~ Corolla scarcely 4 lines long, rose-color? Mature fruit unknown. — The larger petioles, and smaller flowers (all examined tetramerous), with the corolla naked within, and strong calyx-teeth, distinguish this from *S. coffeoides*.

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Gouldia, Nov. Gen.

Calyx tubo obovato vel turbinato;
limbo brevi quadripido. br-
olla hypocraterimorpha, ^{subconjacea} undique
glabra; limbo 4-partito,
lobis activatione valvatis. Ha-
mina 4, ^{conlla} fauci inserta;
filamenta brevisima; antherae
inclusae, longo lineares,
acutae. Stylus gracilis,
apice bifidus; stigmata fil-
iformia acuta, in G. Roman-
zoffiensis crassiora. Ovarium
biloculare. Ovula in pla-
centis crassis medio dissipi-
mento utrinque insertis plurima,
parva, amphitropa. Bac-
ca drupacea bilocularis,
endocarpio pergameno ^{no};

placentis spongioso-carnosis alve-
latis oligo-pleiospermis. Semina
angulata vel complanata, ~~sub-~~
peltata, nunc in alveolis
placenta subimmersa: testa
nucleo conformis, tenui-crusta-
cea, pellicula papuloso-retic-
ulata. Embryo intra albu-
men subcartilagineum rectus;
cotyledonibus ovatis parvis ra-
dicula vix brevioribus. — Fru-
tices vel arbusculæ insu-
larum; foliis oblongis brevi-
petiolatis; stipulis brevibus
^{utrinque integris} subvaginatis; floribus viridulis
albidisve cymosis vel sub-
solitariis.

Kadua spec. (4 et 6), Cham. &
Schlecht. in Linnaea, 4, p.
162, 164
Petesia, Hook. & Arn. Bot. Beech,
Voy. p. 64, 85. non P. Broune, nec
aliorum.

The plants for which the above generic character has now been framed were taken for congeneres by Chamisso and Schlechtendal, and afterwards, quite independently, by Hooker and Arnott. On the whole they appear to be properly associated, although the differences between them are not unimportant. The first species is a tall shrub or small tree, with caducous stipules which are more or less connate within the petioles; the inflorescence, habit, &c. is nearly that of Stylocoryne; the branches of the style are filiform or subulate; and the small drupaceous berry is imperforate at the naked apex. The other is a low, diffusely branched, maritime shrub, with fleshy-coriaceous leaves; the stipules distinctly vaginate, although very short,

and adnate to the base of the petals, which they thus unite, in the manner of Kadua, &c.; the flowers are ~~solitary~~ ^{even} or few (3-7) in a cyme or ~~else~~ solitary; the stigmas are thicker and shortish; and the large, pyriform, whitish, drupaceous berry, at maturity opens at the beaked apex by a round hole or a short transverse chink, through the ~~papery~~ ^{hard} parchment-like endocarp and discharges the seeds. Wherefore it is not sur-

prising that Chamisso and Schlechtendal referred the species to their genus Kadua, to which, in deed, it is manifestly related, ^{through K. murzeana} but which is quite sufficiently ^{various} ~~diverse~~ in character without any ~~species~~ baccate species. The small, at length nearly obliterated limb of the calyx, and the peltate seeds further distinguish

the present genus. Storker and
 Krone, never suspecting that these
 plants had been referred to Kadua,
 made of them new species of the
 fictitious genus Potesia; ~~And~~
~~the latter~~ — a genus which, as
 founded by P. Browne and adop-
 ted by Linnaeus, is admitted to be
 synonymous with Rondeletia, to
 which ~~was~~ Swartz next added a
 species of Gonzalea (for P. spicata,
 Swartz is apparently Gonzalea
spicata, D.C.); ~~and~~ ^{afterwards} which Gortner
 the younger Gortner applied to
 an Oceanic plant (perhaps an
Ixora, or something of that sort,
 upon which DeCandolle founded his
 obscure genus Eumachia); and
 which at length DeCandolle, instead
 of dropping the genus altogether, ~~was~~
 made a receptacle for some
 dubious and probably heterogeneous

Philippine and Mexican species, proposed by Bartling. There is small likelihood that any of these are congeners of the present species.* Nor can I refer the latter to any received genus. Fernelia, ^{with} which they might be compared, like Stylocoryne, has the corolla convolute in aestivation. I dedicate the genus to that excellent naturalist, Augustus A. Gould, M. D. of Boston, the author of the Conchology of this Expedition.

* Pitiesia grandis, Bartl. proves to be Somnera arborescens, Schlecht., ~~for this~~ and is retained by Grisebach as the type of Pitiesia, Bartling, Vid. Novitiae Fl. Panamae in Bonplandia

b. p. 8: P. nitida and P. tenuifolia, Bartl. are species of Limnium (vide supra, p.), and P. ? hispida, Bartl., as Dr. Grisebach informs me, is of wholly doubtful genus, certainly not a Limnium nor a Rondeletia.

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Expedition.

* Pitiesia grandis, Bartl. proves
to be Sommnera arbuscula, Schlecht.

1. Gouldia Sandwicensis. (20)

G. foliis oblongis venosis; cymis
 confertifloris terminalibus nunc
 etiam lateralibus foliis ple-
 runque brevioribus; calycis
^{stipulis subconnatis late triangularibus caducis;}
 dentibus ^{acutis}; corollae tubo gracili
 lobis duplo longioribus; bac-
 cis atro-caeruleis parvis globosis.

Kadua affinis, Cham. & Schlecht. in Linnaea, 4, p. 164.
 (Carr. Walp. in Bot. Meyen., p. 350?)
 Var. a. terminalis: glaberrima;
 foliis membranaceis basi ple-
 runque obtusis. Ludit cyma
~~terminali~~ nunc sessili vel
 breviter pedunculata foliis
 multo brevior, nunc pedun-
 culata ampliori laxiore
 folia aequante vel superante,
 raro decomposita.

Petesia? terminalis, Hook. & Arn.
Bot. Beech. Voy., p. 85.

~~Kadua affinis, Cham. & Schlecht. in Linnaea, 4, p. 164.~~

Var. β. coriacea: glaberrima; foliis
 coriaceis basi acutis; corollae
 tubo saepe perimorso-puber-
ulo: cat. var. a. Ludit

foliis magis minusve venosis
~~et~~ venulosis, ramis junioribus
 costaque foliorum subtus nunc
 hirtello-puberis.

Pteris coriacea, Hook. & Arn.
 l.c.

Var. Hirtella: foliis plerumque
 coriaceis ovali-ellipticis, pa-
 gina inferiore nunc ~~hirtello-~~
~~scabrida~~, costa ramisque
 sive costa ramisque juni-
 oribus hirtellis vel hispid-
 ulis; cymis densifloris teri-
 bus terminalibus et axillari-
 bus. (Pete foliorum quandoque
 eximium.)

Hab. Sandwich Islands;
 gathered by Menzies? ^{Chamisso} Macrae, and
 most later collectors. "Friendly
 Islands" A. Matthews, in herb. Hook.
 Var. α . Mountains behind Honolulu,
 Oahu, in forests. Var. β . Kaala
 Mountains, Oahu, &c. Var. γ .
 Hawaii, Mouna Kea, and elsewhere;
 Kauai; also in the mountains of

Oahu.

Series of forms, intermediate between each of those here characterized, leave no doubt that they all belong to one polymorphous species, although the extremes differ greatly in appearance.

The species is a shrub or small tree, with leaves from 2 to 5 inches long and one or two inches broad, or petioles of $1\frac{1}{2}$ to 4 lines in length. ^{on each side} Stipules broadly triangular, ^{more or less connate, but free from the petioles,} acute, ~~or nearly so~~ distinct, or ^{or nearly so} caducous. Ovary contracted, sessile or nearly so, and shorter than the leaves or in var a, ~~larger~~ sometimes larger, looser, and on a peduncle an inch long, in some specimens ample and decompound. Pedicels from one to three lines in length. Lobe of the calyx triangular, acute, nearly half the length of the ovary, more or less persistent on the fruit. Tube of the ^{hypogynous} corolla barely 3 lines long, slender, smooth,

in var. β , somewhat pruinose-glandular outside; the lobes oblong, obtuse, ^{thick,} valvate in aestivation; the throat, δ , beardless. Anthers linear, acute, ^{emarginate-tipped at the base,} ~~attached~~ inserted by a short filament into the throat of the corolla, from which the tips of the anthers slightly protrude. Style slender, cleft above the middle into two filiform acute divisions, the upper part of which is minutely papillose-puberulent or stigmatose. Ovary, δ , as in *G. Romanoffensis*, but the ovules less numerous. Fruit spherical, ~~about~~ ^{2 or 3} lines in diameter, ~~blue to~~ "dark blue", drupaceous rather than a true berry, the ~~sarcocarp~~ flesh abundant, but the cells lined with a chartaceous or thin crustaceous endocarp, ^{closed,} Placenta less thick and spongy than in *G. Romanoffensis*, ~~*G. carolinensis*~~, but similar in character, each maturing from 8 to 12 angulate-compressed, peltate seeds, of proportionally larger size. Testa crustaceous, ^{int.} with a cellular-papillose

pellicle. In var. β , with firm coriaceous leaves, the venation is inconspicuous, the veinlets obscure. In the other forms the primary and secondary veins are more or less conspicuous, and the fine reticulations of the veinlets evident under a lens: in many specimens, especially of var. γ , this reticulation is strongly marked upon the epidermis of both surfaces of the leaf, in the dried specimens, in so striking a manner that such specimens would be regarded as distinct in species, — especially those which ~~are~~ are shining as if varnished; but this character is not constant, and, moreover, it is ^{occasionally} discernable in the other varieties.

There is in the collection a single, ~~free~~ small specimen from the mountains of East Maui, with young fruit only, apparently of this genus, but with thin membranaceous leaves and slender petioles, which apparently indicate a distinct species; yet it may be only a form of *G. sandwicensis*.

2. Gouldia Romanzoffiensis,G. glabra, humilis, ramosissima;

foliis obovatis seu oblongo-spa-
thulatis obtusis ^(carnaceo) carnosis basi
attenuatis; stipulis compatiolari-
bis brevissimis utrinque uni-
dentatis; floribus paucis in
cymula terminali brevi rari-
usve in axillis superioribus
solitariis; calycis dentibus
obtusissimis in fructu obsoletis;
corollae tubo brevi; stigmatibus
subdilatatis; baccis magnis
pyriformibus ^{mutantibus} albidis, perma-
turis vertice foramine seu rima
brevi transversa perforatis.

Kadua Romanzoffiensis, Cham.
+ Schlecht. in Linn. na. 4. p. 162;
Db. Prodr. 4. p. 431.

Petesia carnosae, Hook. & Arn. Bot.
Neech. Voy. p. 64.

Ital. Karaka, Kurick, Mil-
oris, King's, and other Coral Islands

A. maritime shrub, glabrous,
diffusely much branched, a foot
or two in height. Stipules short,
broadly triangular and apiculate, ~~trun-~~
~~ted at the~~ connate into a very short
sheath, which is adnate with the
bases of the petioles, so that all
separate together when the leaves are
disarticulated. Leaves fleshy, coriaceous,
obovate, oblong-obovate, or in one form
spatulate-oblancoate, one or
two inches long, tapering into a
very short petiole, rounded or very
obtus at the apex, or else obscurely
mucronate-pointed, the primary
veins more or less visible in the
dried specimens, but not the vein-
lets. Flowers few (3 to 7) in a
small and simple, sessile or short
peduncled cyme, which is much
^(or some of them solitary in the upper axils)
shorter than the leaves, expanded
~~flowers not~~ blossoms not seen, but
the flower-buds only 3 lines long.
Calyx-teeth much shorter than the
ovary, ovate, very obtuse. Corolla
thick in the bud, the tube some-
what funnel-form? the lobes ovate,
valvate in aestivation; the throat,
&c. perpetually glabrous. Anthers
linear-oblong, subsessile, acute or
apiculate, attached above the
~~can~~ bifid base, incumbent. Ovary

two-celled; the thickish placenta
 fixed to the middle of the parti-
 tion, covered with small peltate
 ovules. Fruit nodding on pedi-
 cels of 2 or 3 lines in length, ~~ob-~~
^{pyriform} ~~state~~ or subglobose, about half
 an inch long at maturity, "white
 with a bluish tinge" according to
 a note of the collectors; the flesh
~~apparently~~ copious but rather
 spongy; the ^{two} cells lined with a
 thin, parchment-like or almost
 cartilaginous endocarp; ~~the~~
 the summit naked and somewhat
 truncate (the short calyx-teeth
 being obsolete) the naked vertex
 perforate at maturity by a round
 foramen ^{or a short transverse chink} through which the
 seeds may escape. Placenta
 thick, spongy in texture, farose,
 each bearing from 8 to 12 seeds,
 which are ^{peltate} angulate-depressed,
 and partly immersed in the pits
 of the placenta. Testa con-
 formed to the nucleus, thin-
 crustaceous, blackish, thickly
 and very minutely papillose. Albumen

between cartilaginous and
fleshy. Embryo small, little
shorter than the albumen; cotyle-
dons scarcely broader than
the radicle and almost as
long.

Lerchea, Linn.

(Tab.)
 1. Lerchea calycina, sp. nov. f

L. foliis oblongo-lanceolatis acuminatis basi attenuatis, junioribus (praesertim costis venisque sublus) cum ~~ramulis~~ stipulis integerrimis ovato-lanceolatis caudato-acuminatis ramulis floribusque ferrugineo-sericeis; cymis condensatis; lobis calycis ^{lineari-}spatulatis foliaceis tubo corollae parum brevioribus.

Stat. Heije Islands; Ovalau, in fruit only. Also Niti-levu, ~~the~~ ^{with flowers} "in high, woody districts, inland," Mr. Milne; with flowers.

Shrub, "from 6 to 12 feet high; all the young parts clothed with a fine, appressed, silky-villous, ^{ferrugineous} pubescence which remains on the midrib and primary veins of the lower side of the leaves. Branches ~~are~~ slender. Leaves membranaceous,

3½ to 5 inches long, oblong-lanceolate, tapering to both ends, especially at the base, which ~~it~~ is attenuated into a short petiole; the primary veins conspicuous underneath, 12 to 14 pairs; the upper surface glabrate. Stipules single on each side and entire, barely half an inch long, rufous-silky outside, tapering from broad base into a slender acumination, tardily deciduous. Peduncles axillary, an inch or less in length, slender, bearing a glomerate cyme of many small flowers. Calyx more or less ferrugineous-hairy; the limb completely divided into 5 spatulate or linear-spatulate, foliaceous, spreading lobes, which are more than twice the length of ~~the~~^{its} obovate or turbinate tube, and almost as long as the tube of the corolla. Corolla tubular-funnel-form, pubescent externally in the ~~bud~~^{but}, at length glabrate or glabrous; the tube 2 lines long; the limb 5-parted, the lobes oblong-

(obtus,

ovate, valvate in aestivation, spreading in anthesis, glabrous within; the throat and upper part of the tube within exceedingly villous with ^{long} white hairs. Stamens 5, inserted in the throat among the villous beard; the filaments short, slender, glabrous; anthers ~~oblong~~ elongated-oblong, emarginate or slightly bifid at both ends, inserted near the base, incumbent, glabrous (destitute of the few small setae represented in those of *L. longicauda*), their summits along with the dense beard slightly protruding from the throat of the corolla. Style filiform, ~~at length~~ at length projecting to the length of the lobes of the corolla, canescent with a minute appressed pubescence; stigma capitate-two-lobed. Ovary 2-celled, crowned with a conspicuous ~~epigynous~~, ~~disk~~ annular or short-columnar, externally somewhat 5-lobed, epigynous disk, which surrounds

the base of the style. Placenta thick, attached to the dissipation, covered with numerous, closely packed ovules. Fruit ~~dry~~, crowned with the more or less withering calyx-lobes, dry, little more than a line in length, obovate, dehiscent. The thin epicarp separable from the cartilaginous endocarp or cocci, septicidal, the cocci at length opening by their ventral suture, many-seeded. Seeds very small, oval, ^{somewhat angled or compressing} ~~acutish at~~ ^{by marginal pressure} ~~the ends~~, the testa conformed to the nucleus, minutely scrobiculate.

The single specimen, with fruit only, ~~collected~~ gathered in our Expedition, had been engraved on plate, under Mr. Rich's superintendence. I have merely added the details of

(Does not stand in the way of this approximation, as the ~~new~~ ^{known} ~~Blume's~~ Reinwardt's plant differs from the published description.)
 also the fruit; ~~and~~ of the flowers from
 a specimen fortunately collected
 by Mr. Milne (in the ^{cruise} ~~voyage~~ of
 the Herald among the Feejee Islands),
 which was entrusted to me from
 the Hookerian herbarium. The
 plant is evidently a near relative
 of Reinwardt's *Hanthophyllum*
particulosum from Java. Indeed,
 should Blume's character "*stipulae*
~~geminatae~~ ^{magnae} ~~geminatae~~ ^{bipidae}" not be incorrect
 in the latter particular, nothing of
 any importance ~~remain~~ would remain
 in the description to distinguish
 that from the present plant.
 Mr. Bennett ^{remarks} (in Pl. Jav.
 Rariorum, p. 101), ^{implying} ~~implying~~ ~~or supposes~~
 that the aestivation of the corolla in
 Reinwardt's original *Hanthophyllum*
 is imbricated (or rather convolute)
 as in *Wundlandia*. In our plant
 it is certainly valvular. So that,
 whether ^{or not} *H. particulosum* also is to be
 referred to *Lerchea* (as Korthals sug-
 gests), I cannot hesitate to include
 our plant in that genus. The
 enlarged and foliaceous lobes of the

calyx seem to be peculiar to the present species: they could not have escaped remark if in ~~the~~ the Sivan plant. The stigma in *L. calycina* accords with *Xanthostyrum*; but that of *L. longicauda*, as figured in the work above cited, would be similar if the lobes were shortened. The ventrally dehiscent cocci of our species are probably not peculiar.

Plate

Lerchea calycina.

Fig. 1. Young flower-bud. 2. Diagram of the activation of the corolla. 3. A flower. 4. Corolla laid open. 5. Stamens, anterior and posterior view. 6. Upper part of the style and the stigma. 7. Pistil, with the calyx and epigynous disk. 8. Same with ovary and disk vertically divided. 9. Fruit, crowned with the long lobes of the calyx. 10. Transverse section of the same. 11. The fruit dehiscent. 12. A seed. The details all variously magnified.

Argostemma, Wall.1. Argostemma uniflorum, Blume²

Hab. Luzon, in the mountains above Baños, near Manila.
 In fruit only. Either this or an allied one-flowered species; the leaves are not acute.

2.

4. Eytandra, Frut.
1. Eytandra de Hara, Frut.

Ophiorhiza, Lim.

1. Ophiorhiza peploides, sp. nov.

O. herbacea, humilis, diffuse
ramosa; ramis puberulis; foliosis;
foliis parvis saepe 3-5-natis
vel pseudoverticillatis spathulatis
sen ovato-spathulatis basi longe
attenuatis glabris; floribus sub-
solitariis, ~~glabris~~ ~~perolla~~ ~~oblongata~~ ~~intus~~
~~extusque~~ ~~glaberrima~~; ~~filamentis~~
~~filiformibus~~ glabris; filam-
entis filiformibus styloque exsertis.

Hab. Ovolau, Feejee Islands; where
a narrow-leaved form was collected
by Professor Harvey; as also by
Mr. Milne, on Nanua-leve, along the
margin of streams.

A singular little species,
hardly more than a span high,
much branched and leafy; the
leaves resembling those of Peplis
Portula, or of Ludwigia pulustris

or its near relative *L. spathulata*, only an inch or even half an inch in length, inclusive of the ~~petiole and~~ short petiole and the long tapering base, of 3 to 6 lines in length, which in the narrower form is gradually ~~attenuated~~ ^{divergent} in the broader, more abruptly contracted, smooth and somewhat erigulous above, pale beneath; the midrib only pubescent. Many of the leaves appear to be verticillate in threes or fours, but on the branches they are often plainly seen to be falsely whorled in fives, sixes, &c. Stipules obsolete or very small. Flowers terminal, becoming lateral, solitary, or 2 to 3 together. Peduncle 2 or 3 lines long, calyx-tube ovate-globose, the 5 teeth very small, subulate. Corolla 3 lines long, funnel-form, rose-color, glabrous externally; the lobes ovate, valvate in aestivation, as in the genus, the interior not bearded, but very minutely pubescent in the throat. Filaments inserted

low in throat, filiform, and nearly twice the length of the oblong anthers, which are exerted in anthesis. Style glabrous, longer than the stamens; stigma bicamellar, the lobes rotund. Capsule glabrous, rather strongly 2-lobed, 3 lines wide.

2. Ophiorhiza leptantha, Sp. nov.

C. pruticosa, fere glabra; foliis ~~utrinque~~ laetivirentibus oblongo-
seu elongato-lanceolatis
utrinque acuminatis longa pe-
tiolatis; stipulis utrinque binis
setaceis; cyma terminali
multiflora puberula; floribus
plerisque secundis subsessilibus;
corolla alba gracili ~~ultrapollis~~
pollicari, ore tenuissime barba-
to; staminibus inclusis; filamen-
tis anthera aequilongis; stilo
glabro.

alt. 1000 feet.
 Hab. Grolan, Feejee Islands,
 (Feejee Islands. Prof. Harvey.)

Branches woody to the summit,
 minutely pubescent when young,
 otherwise glabrous. Leaves light
 green both sides, glabrous, 4 or 5 inches
 long, ~~an inch~~ 9 to 16 lines wide,
 acuminate, tapering at the base
 into a slender petiole of an inch
 or an inch and a half in length.
 Stipules distinct, setaceous from
 a slightly dilated base, 3 or 4
 lines long. Cyme terminal,
 compound, more or less paniculate,
 densely many-flowered; the earlier
 flowers more or less pedicelled,
 the others mostly sessile or subsessile
 and secund on the branches of
 the cyme. Bracts subulate-se-
 taceous, deciduous. Teeth of the
 calyx short, acutish. Corolla
 "white", slightly pubescent exter-
 nally (under a lens); the slender
 tube filiform, an inch in
 length, or even somewhat longer;
 the lobes ovate, the whole glabrous

within, except a very narrow and inconspicuous ring of delicate beard (of one-celled obtuse hairs several times larger than broad) at the orifice, some distance above the included stamens. Style very slender; lobes of the stigma oblong, obtuse.

3. Ophiorhiza laxa, sp. nov.

O. pruticosa; ramis junioribus saepe ferrugineo-pubescentis; foliis oblongis vel subovatis acuminatis longe petiolatis; cymis pauci-plurifloris laxis; floribus pedicellatis; corolla semi pollicari; cal. fere praecedentis, sed ramosior, laxior.

Hab. With the preceding. Also Ryau, Orolan, and Niti-lebu, Mr. Milne; in woods and on mountains.

Of this "slender shrub" our own and Milne's collection furnish

several forms. I am by no means certain that all or any of them will prove distinct from the preceding species. The structure of the flowers is the same, but the corolla is only half as long; the cymes looser and fewer-flowered, often only ~~three~~ 3-5 flowers, and with manifest pedicels. The leaves vary from an inch and a half long, with a petiole of ~~the~~ ^{in length} three quarters of an inch, to 4 or 5 inches long with the petiole from one to 2 1/2 inches, and in shape from ovate-oblong to ovate-lanceolate. The petaceous stipules are deciduous. Capsule nearly as in O. Munghos.

4. Opniorhiza subumbellata, ^{Forst.}

To this I may doubtfully refer two very imperfect specimens, not sufficient for proper characterization, - one from Tahiti (where Forster

obtained his *O. subumbellata*), the other from one of the Samoan Islands. The two agree in having the stipules single on each side, lanceolate, and scarious, those of the Tahiti specimen tapering into an awn-like point. In this the corollas are short, obovate in the bud; but they seem to be abnormal. It may be noted that Forster's detailed description, of ~~*O. subumbellata*~~, printed from his manuscript by Guillemain in his *Tephrosia Fatiensis*, makes it doubtful if the *O. subumbellata* is really of this genus, since the leaves are said to be ^{very long} alternate, the lobes of the corolla reflexed-spreading, and sulcate in the middle, the capsule ovate and crowned with the persistent calyx. The stipules are not mentioned.*

* Mr. Bennett, the Curator of the Banksian Herbarium, has obligingly ascertained for me, that Forster's plant is truly an *Ophiorhiza*, with opposite leaves, although Forster's own drawing, like his description, makes them alternate. The unexpanded corollas are rather more than half an inch long, but in better specimens from Tahiti, collected by Nelson, they are fully an inch in length.

5. Ophiorhiza oblongifolia, DC.

Hab. Luzon, in the mountains
near Baños. An imperfect speci-
men.

5. Ophiorhiza oblongifolia, DC.

b. Ophiorhiza acuminata, DC.?

Hab. Luzon, in the mountains
near Baños. Imperfect specimens,
in fruit only. The latter same as
Burminger's no. 599 and 1435.

Dentella, Forst.

1. Dentella repens, Forst.

Hab. Luzon; shores of Laguna
near Manila.

Kadua, Cham. & Schlecht.

Char. emend. Calyx tubo hemi-
 sphaerico vel turbinato; limbo
 ad ovarium usque quadrisepto,
 lobis ^{saepe} ~~sub~~ foliaceis. Corolla
 subcoriacea, hyssocraterimorpha,
 intus glabra; tubo ^{elongato} ~~gracili~~,
 limbo quadripartito paten-
 tissimo, lobis aestivatione val-
 vatis marginibus pl. m. redupli-
 catis, ^{apicibus} ~~inflexis~~. Stamina 4, fauci
^{saepe} corollae inserta; filamenta bre-
 vissima; antherae oblongae
 vel lineares, dorso infra
 medium affixae. Stylus
 gracilis, inferne (K. contranthoides tantum excepta)
 villosus; stigmata oblonga seu lineari-filiformia.
 Ovarium biloculare, vertice
 planum. Ovula in pla-

centis medio dissepimento
 adnatis innumera, amphitropa.
 Capsula late turbinata, ^{semihemisphaerica} cartilaginea, calycis
 lobis plerumque persistentibus
 coronata, bilocularis, ~~polysperma~~
~~ma~~, vertice rima trans-
 versa, ^{semibilocularis} loculicide hians, ^{denarium} 10-1
 semina creberrima, compressa (in paucis alata vel
 marginata), hilo marginali.
 Embryo intra albumen carnosum
 rectus; cotyledonibus
 ovatis radícula paullo brevioribus.
 — Frutices vel suffrutices
 sandwicensis, facie
 admodum diversi; foliis aut
 coriaceis rigidis aut membranaceis;
 stipulis competalaribus
 brevibus nudis utrinque

unidentatis; floribus nunc
in cymis thyrsoides congestis,
congestis, nunc in axillis
solitariis terminis vel solitariis
pedunculatis. (Flores interdum
5-meri vel gynaeceum 3-merum.)

Kadua (excl. spec.) Cham,
Schlecht. in Linnaea, 4, p.
157; DC. Prodr. 4, p. 430.

Weigmannia, Meyer, "It. 2,
p. 139"; Endl. Gen. p. 526;
Walp. Rel. Meyer. p. 354,
sed char. carp. falsus.

A group of plants, all natives
of the Sandwich Islands, ^{(very diverse} ~~Polymor-~~
~~phous~~ in habit, but homogeneous
in floral characters, with the singu-
lar exception that two species have
winged seeds. These species (K. glom-
erata and K. centranthoides) ^{of Storker and Brutt} differ

(in appearance

so very widely from K. acuminata,
and even from K. Menziesiana,
89.

that they would unquestionably be
generically separated, were it not
for K. cordata, which is ~~completely~~
~~intermediate~~ in general character and even
by its seeds, connects ^{intimately} them with the

rest of the genus. Although the
ovules are amphitropous, the
seeds are not peltate, like
those of Bouvardia and Stou-
tonia, but are attached by their
margin, so that the ^{wing} (or margins,
~~of the seed~~ when the seed are
compressed, as they mostly are)
is presented edgewise to the placenta.

The three smaller and barely suff-
fruticose species too nearly ap-
proach Kobantia, which, with
a long and slender corolla has
the capsule and seeds of Olden-
landia. Even the foliage and
perhaps the seeds also of Kadua

Corkiana (which may be regarded as the type of the ~~new~~ genus) are not unlike those of Kohautia. The more or less salient edges of the lobes of the corolla and the inflexion of their tips in aestivation may serve as a technical distinction. These tips are much inflexed in K. acuminata ^{and its near relatives,} ~~and K. sp.~~ ~~late~~, where they are long and tapering, but not at all in K. glomerata and K. centranthoides.

K. Menziesiana is ~~apparently~~ appears to be more woody than the other species, and to have a thicker-walled fruit, ~~the epicarp~~ ~~rather fleshy~~, somewhat drupaceous ~~when young or~~ before full maturity. This led the authors of the genus to ~~refer to~~ include in it two fleshy-fruited shrubs,

of which they possessed incomplete materials. (Vide Gouldia, p. 9) Finally K. acuminata ~~and~~ K. petiolata, ^{and K. grandis compose} ~~compose~~ ~~form~~ a group of peculiar habit and inflorescence, but unsupported by any floral or carpological characters to authorize the separation suggested by Nuttall ~~in~~ in applying ^{if one of them} to ~~a species~~ in the Hookerian herbarium, the generic name of Senecio, ~~the name doubtless~~

~~Meyers~~ Weigmannia is evidently Kadia cordata, and what is described ^{and} figured as a single large seed ^{instead of} consists of a mass of seeds closely packed upon the placenta!

The winged-seeded species would be referred to the Cinchoneae according to the present definition of the tribes; but this is ~~not~~ by no

means the only instance in, ~~which~~
~~coniferous~~ ~~tree~~ plants of the order
 of both winged and wingless seeds
 in the same genus. Meddell indi-
 cates this in *Juniperus*; *Juniperus* and *Pinus*
deltoidea. Indeed, the *Rhombospor-*

ra of Korthals seems to be another
 Hedysotideous plant referred to
binchoreae upon this artificial
 character, which in the same
 way ^{too} widely separates *Bourrueria*
 from *Stronstomia*. Even the dis-
 tinction ~~of the polys~~ between
 baccate, drupaceous, and capsu-
 lar fruits in the polyspermous
Rubiaceae is in many cases so in-
 decisive, that we may have to pro-
 ceed further ~~in this~~ than Mr. Ben-
 tham has proposed, and ^{wholly} re-ar-
 range this suborder, taking the
 primary characters from aestiva-
 tion, placentation, and stipulation.

The following are all the known species of Kadua. Forster's Oldenlandia foetida (Strobilites foetida Smith, compared by him with his St. coriacea), if the specimen of the Hookerian herbarium which I have examined be authentic, is not of this genus; ^(not a genuine Oldenlandia, as Benthams would have it) the stamens being inserted towards the base of the short tube of the corolla, ^{on} the filaments larger than the anthers; and the style entire and peltate dilated.

St. Flores in cymis thyrsisve congestis; corolla purpurea;
folia coriacea, in prioribus
quasi ~~nervata~~ lineato-
costata.

1. Kadua centranthoides, Hook. & Arn.
K. glaberrima, basi tantum lig-
nosa, superne dissitifolia;
foliis subsessilibus ovato-lanceo-
latis summis subcordato-ovatis
acutis acuminatis coriaceis
lineato-venosis, floralibus
parvis; bracteis subulatis mi-
nutis; cymis dense multiflo-
ris thyrsideo-paniculatis;
calycis lobis ovario aequilongis
tubo corollae gracilis multoties
breviribus; stylo ^{etiam} glabro;
capsula turbinata vertice
convexiuscula; seminibus mem-
branaceo-alatis!

Kadua centranthoides, Hook. & Arn. Bot.
Bech. Voy. p. 85.

Tab. Hawaii, Sandwich Islands;
on the coast, and on the crater
Lua Pele, &c.; gathered also by
Macrae and Ather.

This species is well named from
its likeness to Centranthus ruber
in foliage ^{general} and habit. Only the
base is woody, and with the leaves
rather crowded, sending up simple
^{herbaceous flowering} stems or virgate branches, from one
to 3 feet in length, smooth and
perhaps glaucous, as is the whole
plant, ~~bearing from 3 to~~ apparently
compressed or auriculate above, and
bearing from 3 to 6 pairs of sessile
leaves; ~~At with~~ the longer internodes
from 4 to 6 inches in length. Leaves

and firm,
 thick, ^{probably} fleshy-coriaceous
 in the living state, conspicuously
 lineate with 7 to 10 pairs of parallel
 veins, ovate-lanceolate, ovate or
 the uppermost and reduced floral
 ones subcordate, all sharply acuminate;
 the lowest about 3 inches long;
 the uppermost an inch or less.

Stipules broadly triangular with a
 subulate point, connate and slightly
~~enfold~~ ^{enfold} adnate to ~~the base of~~ the
 leaves at their narrowed insertion,

rather persistent. Cymes many-
 flowered, ^{rather} dense and small, terminal
 (subtended a small pair of bracts) and
 from the axils of the upper leaves,
 where they are either subsessile or
 on slender compressed peduncles;
 the bracts and bractlets ~~are~~ minute
 and subulate. Pedicels longer than
 the calyx. Lobe of the calyx triangular-
 subulate, bluntnish, hardly as long

(purple? with 291)
as the ovary. Corolla slender-tube,
~~for~~ half an inch long when fully
developed; the oval, obtuse, ~~spreading~~
lobes, ^{only} 1 1/2 to 2 lines long, thick ^{and firm} (as in
all the species) valvate in aestivation
with the combined edges salient, so
as to render the bud four-angled
at the summit (their ~~summits~~
not perceptibly inflexed), in anthesis
widely spreading. Anthers oblong-
linear, included in the throat.
Style filiform, glabrous throughout,
2-cleft at the apex, or with two
linear-filiform obtuse stigmas,
which are often coadunate.
Placenta ~~fixed~~ fixed to the middle
of the partition, covered with
innumerable amphitropous ovules.
Capsule between 2 and 3 lines in
length and of equal breadth
across the scarcely convex summit,
tuberculate, slightly grooved at
the partition, obscurely 4-nerved.

Kelua cantan thurida, Hook. & Arn.

thin - cartilaginous, with a mem-
 branaceous epicarp (calyx-tube),
 which wears away after dehiscence;
 the spreading persistent calyx-teeth
~~barely~~ less than a line in length.
 Seeds extremely numerous, closely
 packed upon the rather narrow
 placenta, seditiform, flat.
 The thin reticulated testa exten-
 ded all round the nucleus into
 a distinct and ~~broad~~ ample,
^{cylindrical} somewhat circular wing,
 inserted at or near one edge.
 Embryo ^(scarcely) ind. fleshy albumen.

2. Kadua glomerata, Hook. & Arn.
K. foliis crasso-coriaceis rigidis
lineato-venosis oblongo-lanceo-
latis summisve ovato-acumina-
tis basi in petiolum brevis-
simum latum subito contrae-
tis caule que inferne pu-
tescente glabris saepe
glaucis; ~~cymis densifloris~~
~~thyrsoides paniculatis~~ inflo-
rescentia calycibus corollis-
que K. centranthoidis sed
pubescentibus; stilo (ut in
genere) inferne villoso.

Kadua glomerata, Hook. &
 Arn. Bot. Beech. Voy.
 p. 85.

Hub. Mountains behind Honolulu, Oahu, Sandwich Islands. Also gathered by Gandichand, &c.

Similar in habit - - - - - and manifestly allied to the preceding species, this is at once distinguished by its downy-pubescent inflorescence and flowers, villous style, and ^{as well as more rigid} larger leaves, ~~of a firmer coriaceous~~ The cauline leaves are lanceolate or oblong-lanceolate, from 4 to 6 inches in length, an inch or rather more in width, the parallel veins or nerves less prominent, the base contracted into a very short and broad but manifest petiole, which are connected with the broadly triangular stipules. Upper leaves shorter, broader, and gradually reduced to the small floral ones. Cymes or clusters naked, the bractlets small.

(linear-oblong,

Length of the calyx fully as long
as the ovary. Lobes of the corolla
oblong, very thick. Stigmas
or branches of the style filiform.
Fruit not seen; but the
ovules ~~after flower~~ are in the
gravid ovary already ~~showing~~
give indications of ~~the~~ winged
seeds.

K. multiflora, glaberrima,
K. centranthoides, str. p.
An.

3. Kadua cordata, Cham. & Schlecht.

K. glabra, inferne fruticosa, ra-
mosa; foliis subcoriaceis vix
lineato-venosis, inferioribus
et ramorum steriliū oblon-
gis lanceolatisve acute acu-
minatis in petiolum brevissi-
imum contractis, superioribus
minoribus dissitis ~~ovatis~~ ^{seu} cor-
datis ovatisve arcte sessilibus,
floralibus bracteisve conformi-
bus cymulis ^{as} ~~as~~ glomeratis ful-
crantibus; calycis lobis ova-
to-lanceolatis ovario duplo
longioribus etiam capsu-
lam subhemisphaericam

Vertice planiusculam super
excedentibus; seminibus ^{compressis} ~~planis~~
~~biformibus~~. planis.

Karna cordata, Cham. &
Schlecht. in Linnaea, 4. p.
160; Hook. & Arn. l.c.

Wiegmannia glauca, Meyen,
Iter. 2. p. 139; Walp. Rel.
Meyen. p. 354, t. 9, stirps
angustifolia.

Var. β . Cymis evolutis, ramis
ultimis secundifloris nudis.

Var. ? V. gracilis; foliis omnibus sessili-
bus lucidulis ^{subtus interdum pilosulis,} ~~venis~~ ^{primariis}
inconspicuis, ^{utrinque} ~~venulis~~ ^{crebre}
reticulatis; cymulis paucifloris
parvifloris nudiusculis.

Itab. Oahu, Sandwich Islands,
 on the mountains behind Honolulu,
 found by Menzies and most sub-
 sequent collectors. Var. β . Moun-
 tains of West Maui; a state of
 the species also found upon Oahu
 by Nuttall. Var. γ . A single,
 rather undeveloped and doubtful
 specimen, from the mountains of
 Kauai, a form undoubtedly of
K. cordata, gathered by Remy on
 Lanai, with bracts of smaller
 size may connect it with this
 species.

More woody than K. centran-
thoides, but the flowering shoots
 seem to be nearly herbaceous; the
 leaves thinner and less nervose,
 the clusters of the cyme involucre
 with the leafy bracts. The in-
 flourescence of the ordinary form,
 and the flowers, &c. are well ex-
 hibited in the figure of Weigmannia

glauca cited above; ~~But~~ but its
 cauline leaves are represented as
 narrower and more linear than
 is common in this species. The
 hairy style, the foliaceous lobes
 of the calyx about half the length
 of the tube of the corolla, fully
 twice the length of the ovary,
 and even longer than the some-
 what hemispherical 8-nerved
 capsule, however, leave no doubt
 that Meyer's plant is K. cordata,
 and even his figure shows indica-
 tions of the mistake that was com-
 mitted in representing the whole
 contents of the cells as single
 seeds. The seeds, which are very
 numerous, are flattened by mutual
 pressure, and some of them obscurely
 winged or margined. The tube of
 the corolla is shorter and thicker
 than that of the foregoing species; the
 lobes broadly ovate.

The specific name is not a
 good one, as even the upper leaves
 are but slightly cordate.

Schlecht.

4. Kadua Cookiana, Cham. & P.

K. gracilis, juncoides, glabra;
 caulibus strictis basi tantum
 ligniscentibus; foliis anguste
 lanceolatis linearibusve utrius-
 que attenuatis coriaceis nervulo-
 so-reticulatis, floralibus bracteis-
 que conformibus; thyrso ter-
 minali paucifloro; calycis
 lobis ^{subulato-} lanceolatis ovarium ~~multo~~
^{longe} ~~to~~ superantibus atque ~~subde-~~
~~fecto~~ longioribus quam capsu-
 la basi turbinata apice
 libero conica; seminibus
 angulatis immarginatis.

Kadua Cookiana, Cham. & P.
 Schlecht, in Linnaea, l.c.;
 DC, Prodr. 4, p. 431.

Stat. Oahu, Sandwich Islands;
on rocks, at Pali, behind Honolulu.
Collected by Menzies, and by Cham-
isso on Hawaii, at the place
where Capt. Cook was killed.

~~This is the most slender species.~~
The most slender species.
Our specimens do not exceed a
span in height (those of Menzies
and of Chamisso are twice or
thrice as tall); and their strict
and rigid, slender stems are her-
baceous from a lignescant base.
Leaves rigid,
1 1/2 to 3 inches long, one or two
lines wide, nervose-reticulated
underneath. Stipules setaceous,
subulate from a dilated base.
Flowers few, thyrsoid. Bracts
and calyx-lobes subulate, leaf-like,
resembling the leaves. Corolla
3 to 5 lines long; the tips of the
ovate lobes inflexed in aestivation.

Stigmas filiform-linear, Capsule
 nerved, acute at the base, and
 with a projecting, obtusely conical
 free summit not much shorter
 than the body or adnate portion.
 Seeds very numerous, angled by
 mutual pressure, ~~not at all~~
~~marginated~~. often wedge-shaped,
 not at all marginated.

1924

5. Kadua parvula, Sp. Nov.

K. suffrutescens (pedalis et ultra),
glaberrima; ramis gracilibus
usque ad apicem foliosis; foliis
coriaceis utrinque lucidulis
conformibus ^(unciam longis) ovato-lanceolatis
acutis, inferioribus petiolatis
superioribus sessilibus, venis pri-
maris inconspicuis; floribus
paucis (5-9) in cymula
terminali; calycis lobis
lato-lanceolatis tubo corollæ
dimidio brevioribus, capsula
turbinata vertice sub-plana
æquilongis; seminibus an-
gulatis.

Hab. Low hills behind Wainai,
 Oahu, Sandwich Islands.

Stems more or less lignescent
 from a ~~thicker~~ woody subterranean
 base, a foot or two in height, bran-
 ching; the branches very leafy; the
 internodes from 2 to 6 lines long. Leaves
 about an inch in ^{and 3 to 5 lines in breadth,} length, nearly uni-
 form, except that the lowest are
 contracted at the base into a petiole
 of a line or two in length, while the
 uppermost are sessile by a broader
 base, ^{thick and} coriaceous, ^{in texture,} and perhaps some
 green and smooth both sides, the
 primary veins and the reticulated
 veinlets obscure, especially the former.
 Lobes of the calyx triangular-lanceolate,
 longer than the turbinate ovary, in fruit
 becoming ~~max~~ enlarging to 3 lines in
 length and becoming lanceolate, ~~and~~ pli-
 aceous, and fully ^{equalling} the length of the broadly
 turbinate, flat-topped, obscurely nerved
 capsule. Corolla 4 or 5 lines long.
 Stipules on each side subulate-pointed.

b. Kadua glaucifolia, Sp. Nov.

K. suffrutescens (pedalis), glaberrima; ramis usque ad cymam sessile multifloram folioris; foliis subcoriaceis ovato-lanceolatis (inferioribus lanceolatis) acute acuminatis florisque breviter petiolatis (summis sessilibus) subtus glaucis penninerviis; calycis lobis subulatis tubo corollae gracilis multoties brevioribus capsula fere hemisphaerica ^{vertice} ~~apice~~ convexiuscula paullo brevioribus; seminibus angulatis.

Itab. Mountains of Kauai, one of the Sandwich Islands.

This has the habit of the last (to which it is nearly related), and also of some Indian species referred to *Stedytis*. The slender stems are manifestly lignescant; the flowering branches leafy up to the semile,^{er} flat-topped, many-flowered cyme. Leaves from one to two inches long, 3 to 8 lines wide, tapering to an acuminate point, white-glaucous beneath, where the midrib is prominent, and the numerous primary veins and the reticulated veinlets are conspicuous; above the reticulation ~~only~~ is most evident. Stipules as in the last. Bractlets subulate. Lobes of the calyx subulate, longer than the ~~vary~~, about a line long, in fruit ^{little increased} ~~2 lines long~~ and shorter than the almost hemispherical nearly nerveless capsule. Corolla with a slender tube ^{mouth} an inch in length, and ovate or oblong lobes a line and a half in length, their blunt tips inflexed in aestivation. Stigmas linear, short. Seeds angled or flattened by pressure.

7. Kadua Menziesiana, Schlecht., Cham. &

K. puticosa, ramosa, foliosa;
foliis coriaceis tenuiter venosis
ellipticis oblongisve breviter
petiolatis obtusis vel obtuse
acuminatis; cymis puberulis
dense paucifloris thysum
interruptum angustum saepius
~~formantibus~~; efficientibus;
calycis lobis ovario brevioribus
e capsula globoso-obovata
vertice libero protuberante
denuo deciduis; seminibus
angulatis. — Variat, foliis
nunc ovalibus nunc anguste
oblongis; floralibus ovatis sessili-
bus, junioribus subtus parce
pubescentibus vel glabris; cor-
ollis aut puberulis aut gla-
bris; vertice capsularum aut
convexo aut conico.

Stedytis coriacea, Smith in Rees
Cycl. no. 11.

St. conostyla, Gaudich, Bot.
Voy Freyë, pt. 94.

Kadua Menziesiana, Cham. &
Schlecht. l.c. p. 160; Db. l.c.

K. Smithii, Hook. & Arn. Bot. Beech.
Voy. p. 86.

Oldenlandia conostyla, Db. Prodr.
4. p. 428.

Tab. Sandwich Island: Hawaii,
at various stations near the coast.
Oahu; hills of Pearl River; a nar-
row-leaved form. Found by
Menzies, ~~and most~~ Gaudichaud,
Chamisso, &c.

A variable, but pretty well-
marked species, decidedly shrubby.
Probably attaining the height of several
feet. Leaves coriaceous, inclined to
turn dark-colored in drying, one or
two inches in length, generally elliptical

and an inch or less in breadth, in a narrow-leaved variety scarcely half an inch wide, the primary veins very slender, scarcely more conspicuous than the delicate reticulation: petioles evident even on the floral leaves, from one to 5 lines long. Stipules short-pointed. Inflorescence a ^{small and} contracted terminal cyme, subtended by a pair of roundish floral leaves, and usually with similar sessile clusters in the axils of one or two pairs of leaves below, generally ~~hirsute~~ ^{cinereous} (as is the calyx and often the corolla) with a fine pubescence. Lobes of the calyx triangular, barely half a line long, corolla about half an inch long when fully developed; its lobes broadly ovate, at length oblong, the tips inflexed in the bud. Style undivided; stigmas 2, shorter than in any other species. Capsule apparently with a fleshy epicarp when young, which at length becomes a ~~thin~~ ^{mere} pellicle. globular-obovate, 2 to 3 lines long, the free summit strongly convex or obtusely conical, varying from ~~one quarter~~ ^{one} to almost ~~half~~ ^{three quarters} the length of the fruit, ultimately 4-valved at the top. Seeds compressed angled.

(the short calyx-lobes usually falling away before the fruit matures, leaving an annular scar.)

§2. Flores solitarii vel terni axil-
ares, potiusve supra-axillares;
perigonii filiformes; calycis lobis magni-
bus fructu mutante; corolla viridula
limbo amplo, lobis ^{acuminatis} acumina-
tis; folia saepius mem-
branacea, laxe penninervia;
frutices foliosi.

8. Kadua acuminata, Cham. & Schlecht.

K. glaberrima; ramis gracilibus;
foliis chartaceis lanceolatis
sensim acuteque acuminatis
~~inferioribus~~ breviter petiolatis,
junioribus subsessilibus; calycis
~~lobis~~ ^{lobis} anguste lanceolatis;
capsula ex Cham.

Kadua acuminata, Cham. & Schlecht.
l.c. p. 163; Hook. & Arn. Bot. Beech.
p. 85.

Stab. Sandwich Islands, in the
mountains behind Honolulu, Oahu.

Also gathered by Chamisso and by
Lay and Collie, &c.

Leaves of a rather firm texture
but hardly coriaceous, broadly lance-
olate and tapering gradually into
the slender acumination, 2 or 3 inches
long, and from half to two thirds of an
inch wide toward the base, which
is obtuse, the petiole only 2 or
at most 3 lines in length. Stipules
subulate-pointed as in most species.
Peduncles filiform half an inch or
an inch long, solitary, rarely in
pairs. Ovary turbinate, and acutely
quadrangular as in all this section.
Lobes of the calyx 2 or 3 lines long,
twice the length of the ovary, linear-
lanceolate, mostly shorter than the
tube of the corolla. The latter is
white or greenish, hypocrateriform, with
the tube 4 lines long, not twice the
length of the recurved-spreading
ovate-lanceolate lobes, the slender
tips of which are strongly induplicate.

in the bud. We have not the fruit. According to Stokes and Arnott it is ^aglobose ^(capsule), but from the way it should resemble that of the following species. Chamisso describes it as obovoid, tapering into the peduncle, and [4-] nerved; also as drupaceous, the sarcocarp rather thicker than the endocarp, but at length dry and dehiscent. I suspect it hardly differs in this respect from the following species.

9. Kadua petiolata. Sp. Nov.

K. ramosa, glabra; foliis oblongo-lanceolatis oblongisve subito acuteque acuminatis basi plerumque acutis longius petiolatis membranaceis vel chartaceis laxe venosis; floribus saepe ternis; calycis lobis lanceolatis seu ~~triangulatis~~ triangulari-lanceolatis ^{late} capulam turbinatam subaequantibus.

Senecioia jasminia, Nutt. in Herb. Hook.

Var. β . ovalifolia: major; foliis ovali-oblongis, venis crassioribus.

Hab. Oahu, Sandwich Islands, near Waimai and Honolulu. Var. β . Mountains of West Maui.

This apparently plentiful species must have been confounded with *R. acuminata*; and indeed is distinguishable from it only or principally by its broader, more abruptly acuminate leaves, on slender petioles, and the broader calyx-teeth. The petioles are usually half an inch long when the blade of the leaf is 2 or 2½ inches long; the texture of the latter either thin membranaceous, or chartaceous. ^{Reduncles are to three or trifid, distinctly supra-apillary.} ^{3 to 12 lines long.} Ovary turbinate with four acute decurrent angles alternate with the calyx-lobes. Corolla greenish; the slender tube 4 lines long, longer than the oblong-lanceolate, acuminate, reflexed-spreading lobes. Style 2-cleft above; the divisions filiform-linear. Capsule 3 lines long, and nearly as broad at the depressed summit, thin-nish, 4-nerved, and with ^{as} ~~as~~

as many less distinct intermediate
nerves. Seeds siliiform, flat, wing-
less.

While this approaches the pre-
going species so much as to ~~render~~
render the separation very doubt-
ful, the variety ovalifolia, with
its stronger-veined leaves 3 or 4 inches
long and an inch and a half or
more in breadth, or petioles 6 to 9
lines in length, nearly approaches
the following, thus connecting
extremes which I dare not venture
to refer to one species, although
suspecting that this will be
done hereafter.

10. Kadua grandis, Sp. Nov.

K. foliis amplis ~~ovalibus~~ oblongis ~~que~~ ovalibusque brevis acuminatis perspicue penninerviis longius petiolatis, junioribus ad costam venasque sapius pubescentibus; calycis lobis foliaceis ovato-lanceolatis capsula late tubinata acuta 4-costata aequilongis; corollae lobis tubum aequantibus.

Hab. Sandrich Islands; in the District of Puna, Hawaii, in fruit. Also gathered by Kuny on Hawaii, and a form of it on Lanai.

Apparently a rather large shrub, with stout branches, glabrous, except a fine hairiness which in

Some specimens occurs on the mid-rib and veins of the leaves. Stipules corpetolar and forming a short truncate sheath, which is abruptly cuspidate on both sides. Leaves membranaceous or somewhat coriaceous, ^{veiny} oval or oblong, from 3 to 6 inches long and $1\frac{1}{2}$ to 2 inches broad, tipped with a short and abrupt acumination, obtuse or mostly acute at the base, the petiole varying from half an inch to an inch in length. Inflorescence axillary or distinctly supra-axillary; peduncles solitary and single or trifid, 6 to 18 lines long, nodding in fruit. Ovary turbinate, 4-nerved as in the whole section. Lobes of the calyx foliaceous, oblong-ovate or ovate-lanceolate, 4 or at length 5 lines long. Tube of the corolla 5 or 6 lines long; the lanceolate ^{acuminate} lobes when developed of about the same length. Capsule

varying to hemispherical,
 very broadly turbinate, 4 to 5 lines
 long and of equal width at the
 flat summit, acutely 4-ribbed,
 or when young 4-angled, and with
 inconspicuous intermediate nerves.
 Seeds apparently flattened.

Houstonia, Linn.*

1. Houstonia (Antis) Hymnifolia.

Hedyotis Hymnifolia, Ruiz & Pav.

Zel. Per. 1. p. 56, t. 88; H.B.K. Nov.

Gen. & Sp. 3, p. 391.

H. Hymnifolia, Cav. Zeb. p. 54, t.
 575

Antis (Ericetis) Hymnifolia, DC.
 Prodr. 4. p. 432.

Hab. Obrajillo, shades of Peru.

* In respect to the characters of
Houstonia, Odeanandra, Hedyotis, &c.
 see Proceedings of the American Academy
 of Arts and Sciences, Sept. 1859,
 4, p. .

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Plum.,

Oldenlandia, Linn.

1. Oldenlandia paniculata, Linn.

Oldenlandia paniculata, Linn. i Burm.
Fl. Ind. t. 15, f. 1; Db. Prodr. 4, p.
427; Miq. Fl. Ind.-Bat. 2, p.
191.

O. multiflora, Db. l. c. O. debilis, Hort.,
~~O. debilis, Hort., Prodr. p. 10.~~

Hedyotis racemosa, Lam. Ill. t. 62,
f. 2; Wright. 2c. Pl. Ind. Or. t. 312.

N. multiflora, dichotoma, & media,
Bar. 2c. t. 573, 574.

Gerontogea racemosa, Cham. &
Schlecht. in Linnaea, 4, p. 155.

Var. crassifolia: diffusa, humilis;
foliis ovatis subrotundis spa-
thulatisve carnosis.

Oldenlandia crassifolia, Bartl.
in Db. Prodr. l. c.

Gerontogea racemosa, Cham. & Schlecht. quoad
spec. & Radack.?

Stat. Navigators' or Samoan
and Feeje Islands. Var. Some-
somo and Nanna-leve, Feeje
Islands. From Luzon, near Ma-
nilla, an intermediate form.

The var. crassifolia is a mari-
time state, with smaller and
fleshy leaves, few-flowered pedun-
cles, and usually larger capsules.
Mr. Milne collected a narrow-
leaved form of it at Futuna (Fee-
je Islands?), on the sea shore,
and Mr. Wright found a similar
form at the Lov Chor Islands.
Bartling's O. crassifolia may be
confidently referred to it, and per-
haps Horst's O. debilis.

2. Oldenlandia tenuifolia, Forst.

Hab. Kewa, Feejee Islands.
(Also collected by Prof. Harvey.) Baldera,
Philippine Islands: a fragment.
Rio Janeiro, Brazil.

The specimens are elongated,
lax, apparently trailing, sparingly
branched; the peduncles all one-
flowered; the larger leaves 2 lines
wide, tapering to each end; the
corolla short as in O. Burmann-
niana, ~~which~~ the Indian specimens
of which ^{our Oceanic plant} ~~they~~ does not altogether resemble.
But it does accord well with
the specimens from Rio Janeiro,
and with similar ones of O. herbacea,
Dc. collected by Spruce on the Am-
azon and by Fendler on the
Isthmus (the length of the corolla
of the latter (in ~~an~~ ~~ascent~~ later
flowers) not affording any marked
distinction.

3. Oldenlandia Salzmanni.

Antis (Panetos) Salzmanni, Dc.
Prodr. 4, p. 433.

Hab. Rio Janeiro, Brazil. A smooth
ish and a villose-hirsute form.

Var. *caerithia*: *diffusa*, *humilis*

larato-apatato *larato-apatato* *larato-apatato*

Cellaria caerithia, *Reut.*, in

St. l.c., *Reut.*, *Reut.*, p. 10?

St. l.c., *Reut.*, *Reut.*

Stedyotis, Lin.

1. Stedyotis Cratogeomum, Spreng.

Cratogeomum Ambroicicum, ^{majus,} Rumph.
Herb. Amb. b. p. 25, t. 10.

Oldenlandia verticillata, Lin.
Mant. p. 40.

Stedyotis Cratogeomum, Spreng.

Pug. 2, p. 35; Bl. Prodr. 4, p. 420.

St. Lapeyroussii, Bl. l.c.; A. Rich. Voy.
Botrolab. p. t. 23.

St. Venosa, Korth. in Med. Kruid. l.c.;
Miq. Fl. Ind. Bat. 2, p. 182.

Metabolos venosus; Blume, Bijdr. p.
991, Bl. Prodr. 4, p. 435.

Herb. Freeze Islands (Ovolae);
likewise collected by Harvey and Milne;
by the latter also at the Solomon
Islands; and by McGillivray at
Cape York, Tropical Australia.

The above synonyms are probably
correct, and more may be added.
The leaves, &c. resemble those of St.

Costata, R. Br.; but the calyx-teeth are larger, erect or connivent in fruit and as long as the latter. They are often 5 in number, one of them sometimes shorter ~~and~~ ^{or} imperfect; and the fruit, which is very hardly if at all septicidal, is occasionally trilocular.

2. Stedytis laevigata, Miq.

Stedytis laevigata, Miq. Fl. Ind.
Nat. 2. p. 178

Metabolos laevigatus, ~~Bartl.~~ DC.
Prodr. 4. p. 436. (Sclerococcus, Bartl.)

Stab. Luzon; in mountains near Maïos.

Smooth, or nearly so: the angles of the stem above somewhat ciliate. Teeth of the calyx not half the length of the ovoid-oblong, striate-nerved, at length bipartible fruit. Veins of the leaves slender, curved; the venlets loosely reticulated.

(Diplophragma)

3. Hedyotis | Cunningii, Sp. Nov.

14. ~~fruticosa~~ foliis membranaceis
 laxe venosis oblongis seu ovato-
 lanceolatis acuminatis basi
 subacutis longiuscule petiola-
 tis, junioribus subtus pubes-
 centibus; stipulis hirtellis
 truncatis utrinque in sub-
 lam pinnato-3-5-fidam glandi-
 feram ~~producentem~~
 auctis; cymis laxifloris;
 floribus pedicellatis; calycis
 limbo 4-partito, lobis lineari-oblongis sub-
 recurvis tubo suo hirsuto aequi-
 longis, sinibus obtusis; corolla
 brevi quadripida fauce
 arachnoideo-villosissima;
 antheris inclusis; capsula
 septicida.

Itab. Luzon, in the Majai-jai mountains, near Manila.
(Same as no. 937, coll. burning.)

Apparently a large herb or suffrutescent plant; the younger parts more or less pubescent. Branches quadrangular, with the angles rounded and a groove on each face. Leaves 2 to 4 inches long, 12 to 18 lines wide, oblong, verging to ovate-lanceolate with a tapering acumination, membranaceous, loosely veined, at length glabrous above and glabrate beneath, but the midrib and principal veins more or less pubescent. Petioles slender, 5 to 9 lines long. Vaginate stipules very short, truncate, and produced on each side into a ^{slender} process, about 2 lines long,

furnished with one or two aris-
 tiform appendages on each
 side, ~~and~~ tipped with a ^{small} gland.
 Cymes axillary, or terminating
 short branches, ^(open) shorter than
 the leaves: peduncle an inch
 or less in length: pedicels fili-
 form $1\frac{1}{2}$ to 3 lines long. Bracts
 subulate. Calyx a line and a
 half in length; the tube turbinate,
 the lobes linear-oblong, obtuse,
 foliaceous, not carinate, above
 recurved-spreading, fully half
 the length of the corolla; the
 sinuses narrow but acute
 obtuse, ^{extending almost to the ovary} Corolla almost
 campanulate, about 2 lines in
 length, ^{four-lobed to the middle} glabrous externally;
 the ^{oblong} lobes valvate in aesti-
 vation; the throat very villous
 with long, curly, white
 hairs. Stamens inserted in
 the throat of the corolla; ~~sub~~
 filaments very short; anthers

oblong. Style somewhat exserted; stigmas 2, oval, flat.

Ovary 2-celled; Placenta attached to the middle of the dissepiment, pluriovulate. Capsule a line and a half long, ^{turbi-} the summit not at all projecting ~~superiorly~~ or free, nate, coriaceous with a thin smooth epicarp, septicidal to the base, the cocci opening widely down the ventral suture. ~~Seeds not seen. Belongs to the section which contains~~ ~~*H. scandens*, Roxb.~~, apparently not splitting on the back. Seed oblong, flat, thin edged, with a central, ~~moderately~~ ~~for~~ slightly protuberant hilum.

The fruits are all old and dehiscent, the seeds mostly shed.

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Ord. Valerianaceae.

1. Valeriana, Linu.

1. Valeriana gracilipes, blos.

Valeriana gracilipes, blos in Gay
Fl. chil. 3, p. 231.

Hab. Chile, near Santiago,
A shrubby species, with small, ~~fleshy~~,
rather fleshy, barely denticulate leaves.

2. Valeriana pinnatifida, Ruiz & Pav.

Hab. Peru, near Lima; also
Obrajillo, and Baños.

3. Valeriana interrupta, Ruiz & Pav.

Hab. High Andes of Peru, near
Casa Blanca.

4. Naleriana globiflora, Nair & Pav.

Stat. Andes of Peru, above Baños;

a glabrous form. ~~It is a basal branch,~~
~~a possible~~ ~~glabrous variety, with the stem a~~
~~slender flowering stem a span high,~~
~~and the inflorescence the yarrow; the~~
~~materials imperfect.~~

5. Naleriana lyrata, Vahl.

Var. B. ^{oblongo-lanceolatis longe petiolatis,} foliis radicalibus ^{nunc pin-}
atifido-laciniatis, nunc inte-
gerrimis.

Stat. Andes of Peru, near Baños.

This is probably a mere variety
of Vahl's N. lyrata, with more
slender and less divided radical
leaves, some of them, indeed, entire,
and the others merely lacinate. The
slender, almost naked stem from a
span to a foot and a half in height.

3

6. Nalerialia coarctata, Ruiz & Pav.
^{Abwe}
Stat. Banos, Andes of Peru.

The leaves are mostly narrower than in Ruiz and Pavon's figure, and the scape is naked. The fruit is ^{pendulous} ovoid, smooth and nerveless; the calyx-limb of five plumose setae which are ~~can~~ dilated at the base and connate into a short cup or crown, as in N. serrata.

7. Nalerialia pycnantha, sp. nov.

N. herbacea - glaberrima, rana,
multiceps e caudice crasso; foliis
carnosis hand ciliatis, radicalibus
lineari-spathulatis, caulinis 2
vel 3 verticillatis ^{oblongis sessilibus} versus medium
scapi simplicissimis 1-4-pollicaribus.

(Scarioro-bracteatis
floribus) in capitulum densum
oblongum ~~Scarioro-bracteatum~~ arcte congestis; ache-
nis anguste ovato-oblongis ^{lanceolatis emarginatis});
pappo 5-7-radiato, setis basi
comatis.

Hab. High Andes of Peru,
"on the Alparamarca mountain
peak." In fruit.

This is related to N. coarctata;
but it can hardly be a more
alpine and depressed variety of
that species. The thick caudex,
leaves, and scape are much more
succulent, the leaves not ciliate,
the flowers crowded into one com-
pact head, ^{which is} either globular or
at length cylindraceous, and
fully half an inch thick. Baseline
leaves a single pair or a whorl
of three, half an inch long; the

crowded radical ones an inch or more in length.

8. Nalericana globularis ~~is~~, Sp. Nov.

N. herbacea, ^{glabra} ~~depressa~~, caespitosa,
glabra; caudice crasso; foliis
omnibus radicalibus subcar-
nos anguste spatulatis vel
sublinearibus basi attenuatis
integerrimis; scapo nudo 1-3-
pollicari capitulum globosum
scarioso-bracteatum gerentibus;
achenis ovalibus ^{lateribus} facie enerviis; pappo
10-12-radiato, setis basi connatis,
Varia scapo brevissimo.

Itab. High Andes of Peru in
the environs of Casa Blanca; in
~~the~~ fruit. A form "on the crest of
the Andes" is more condensed, the
scape very short.

Less fleshy than the preceding species, the thick rhizomata forming depressed tufts. Leaves about an inch long including the attenuate base or petiole, towards the apex a line and a half broad, thickish but plan, the midrib prominent underneath. Scape mostly slender and perfectly naked. Bracts of the globose head nearly as in *N. pyrenantha*, the achenia ~~are~~ broader and flatter, and the long, plumose setae of the pappus more numerous.

N. Valeriana rhizocephala
 sp. nov.

N.

7
9. Naleriana rhizantha, sp. nov.

N. glabra; radice crassa fusiformi
rosulam foliorum foliis rosu-
latis spatulato-rotundatis car-
nosis, capitulum florum arcte
sessile depressum circumscissis,
coronata; pappo cupulato bre-
vissime 5-radiato, radiis denti-
formibus ^{nudis} per anthesin involutis.

High Andes of Peru; "on the
Alpamarca Mountain-peak.

"Succulent and said to be es-
culent; root fusiform; leaves an inch
in length and breadth, obtuse, sur-
rounding a central cake of flowers,
all even at the surface and densely
congested". Pickering, adn. The speci-
mens are scanty and in poor con-
dition; but the principal characters
can be made out. The bracts are

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scarious and not connate, ^{and} the
flowers those of a Valerian, ex-
cept that the setae of the pappus
are reduced to short, tooth-
like, ^{marked} processes on the border of a
cup, like that of many Valerians,
within which they are involuted in
the usual manner. Whether they
develop to any considerable length
in the fruiting state is unknown;
but it is unlikely that they become
plumose. So that this species
militates strongly against Persoon's
genus Phyllactis, ^{as} recently restored
and extended by Weddell.



Ord. Calyceraceae.

1. Boopis, Juss.

1. Boopis anthemoides, Juss.

Stat. Rio Negro, North Patagonia.

An imperfect specimen, the flowers or fruits all fallen from the chaffy receptacle; but it appears to belong to this species.

2. Boopis crassifolia.

B. glaberrima; caule (spitham
eo ad pedalem) ramoso adscen-
dente; ^{ramis ad apicem usque foliosis;} foliis carnis, caulinis
sessilibus plerumque subamplex-
icaulibus lanceolatis seu lingu-
latis repando-denticulatis; cap-
itulo breviter pedunculato; involu-
cro subcarnoso ^{alt. 5-7, p. 10} ~~5-7~~ partito, seg-
mentis oblongis; filamentis vix basi

(fere 2
monadelphis; acheniis) pentap-
teris; calycis lobis ~~fructus~~ ma-
turiis scarioso-cartilagineis dorso
eximie carinatis intus concavis
marginibus tenui erosio-denticula-
tis ^{pl. m.} ~~modice~~ difformibus, nunc
late triangulari-oratis acutis
brevibus, nunc ovato-lanceo-
latis vel subulatis achenium
dimidium adaequantibus; pa-
leis receptaculi filiformibus apice
spatulatis.

Acicarpa crassifolia, Miers in
Ann. & Mag. Nat. Hist. ser. 3,
6 (1860), p. 402.

Hab. Rio Negro, North Patagonia
in sand on the shore. Maldonado,
Uruguay, no. 1068 in herb. Hook.)

A rather stout, succulent, ^{glabrous} branching herb, a foot high; the root not seen; the branches leafy to the top. Leaves very fleshy, one or two inches in length, 3 to 5 lines in width, all sessile, and mostly partly clasping, repandly more or less toothed, the ~~short~~ salient teeth rigid or somewhat spinulose; the lower leaves incline to spatulate or lingulate, the upper to linear-lanceolate; the latter acute or mucronate. Heads solitary terminating the stem and short branches. Divisions of the involucre resembling the leaves, 3 or 4 lines long in blossom, twice as long in the fruiting heads. ^{all perfect} Tube of the corolla filiform, ^{at length becoming} half an inch in length; the limb ~~cyathiform~~ deeply 5-cleft; lobes oblong. Stamens 5; filaments inserted upon the ~~thorax~~ orifice of the corolla, scarcely if at all monadelphous; but their dilated bases glandular. Thickened at

margin or a little below; these glandular portions answering to the five
arcolae alternate with the stamens;
anthers rather longer than the fila-
ments, obtuse. Style filiform,
exserted; stigma obtuse. Achenia
3 lines long, turbinate, with five
very acute and salient or winged
angles, which are continued into
the ^{strong keel} ~~parts~~ of the lobes of the calyx.
The ^(calyx-lobes) are of the same texture
as the wing-like angles of the
achenium, are concave ~~or flattened~~
on the inner face and strongly keeled
on the outer, and vary in different
flowers, or even on the same achenium,
from broadly triangular or
dilated-ovate and one-third the
length of the achenium, to ovate-
lanceolate and pointed or subulate
and more or less elongated, sometimes
nearly the length of the achenium,
but generally shorter. Exterior
paleae of the receptacle linear-fili-
form, the inner almost setaceous,

with a dilated or spatulate tip,
from 3 to 7 lines long, persistent.

Our specimens are mostly
in fruit. I do not remember
the state of Tweedie's specimen in
the Hookerian herbarium, with which
ours was long ago compared; but
I suppose it bore ^{the} flowers only; ^{else}
Mr. Miers could hardly have
referred the plant to Acicarpus.

* De Candolle ^{will generally be thought} ~~was~~ quite justi-
fied in disregarding ~~some~~ ^{various} quali-
fied recommendation to change ~~Tro-~~
~~sius~~ ^{name}.

For ~~the~~ apparently the ovaries, and
certainly the achenia, are not at
all concreted, and the calyx-lobes
are not spinescent but ^{rather} chaffy.
I should imagine that Mr. Miers
would, on the whole, have referred
it to his genus Monocarpus,

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or else as I have done to Boopis.
In view of the more or less
diffused calyx-lobes, the nar-
rowest become subulate and more
indurated, I am led to think
that even Boopis will at length
be reduced to a mere section of
the original genus Calycera.

2. Acicarpia. Juss.

1. Acicarpia spathulata. R. Br.

Hab. Rio Janeiro, Brazil.

Mr. Miers has adopted Mr.
Brown's very qualified recommen-
dation to change Jussieu's name
to Acicarpa. It will generally be
thought, however, that DeCandolle
and others have rightly retained
the original name, since carpha
may as well refer to calycine

as to receptacular chaff, while
^{substituted} the name Acicarpa has no
great advantage as respects ety-
mological appropriateness.

Scabiosa maritima, Linn
(S. Apicana, Ecklon) was picked
up at the Cape of Good Hope.



Ord. Compositae,

Subord. I. Tubuliflorae,

1. Nermonia, Schreb.

1. Nermonia splendens, Less.

Stat. Brazil, near Rio Janeiro;
a glabrate form. Organ Mountains;
a variety with the vigorous shoots
strongly angled, and the indumentum
of the ^{lower surface of the} younger leaves ferruginous,
of the lvs., silvery.

2. Nermonia scorpioides, Pers.

Stat. Brazil, in the vicinity of
Rio Janeiro: several varieties.

3. Nermonia myrtillifolia, Sp. Nov.

V. (Lepidaploa) scandens? frs glabra;
ramis foliosis apice subscorpioides-
capituliferis; foliis parvis ovato-ob-

longis sen ellipticis obtusis
obsolete denticulatis sub semilibus,
venis obscuris; capitulis semil-
ibus folio aquilago stipatis;
involucri 10-12. flori squamis
lanceolatis sen linearibus
omnibus cuspidato-acumin-
atis; ovariis sericeis; pappi se-
rie exteriori breui squamellata.

Stab. Brazil, near Rio Janeiro.

This is probably common around
 Rio Janeiro, and very likely already
 described; but I cannot identify
 it with any published species.
 It is no. 546, of Martius's Herb.
Flora Brasiliensis; it was also
 collected by Gardner, and mixed
 with his no. 5508, as mentioned
 Benth. (V. platycéphala) ^{flowering}
 The leaves may be likened to those of
Vaccinium Myrtillus for size and

shape; but they are pale and obscurely cinereous; those of the somewhat scorpioid inflorescence 4 to 6 lines long, about ~~the~~ ^{length} equalling the sessile heads. Involucre campanulate; the coriaceous scales slightly arachnoid-pubescent, or at length glabrous; the outermost oblong-lanceolate, the inner linear, all sharp-pointed. Mature achenia not seen. Pappus white; the exterior short and squamellate.

4. Nerminia denticulata, DC.

Var. foliis fere integerrimis supra
scabridis; cyma floribunda opposi-
ori.

Stat. Maril, near Rio Janeiro.

Although the leaves are entire and roughish, this seems ^{a form of} to be De-
Candolle's N. denticulata, or at least of
Gardener's plant referred here by Bonpland
in Land. Jour. Bot. 4, p. 114.

5. Nerponia cinerea, Less.

Stat. Luzon, near Baños, and Singapore: the var. parviflora (N. parviflora, Reimv., Miq.). Luzon near Caldera and Manila; Hunter's River, New South Wales; and Tiffney, New Zealand (not noticed in Hooker's Flora of New Zealand): the var. stenophylla (N. cyanoprioides, Walp.); a very narrow-leaved form of this polymorphous species. Forster's Chrysocoma purpurea belongs to this species, according to the specimen in Herb. Lambert, now in the British Museum.

Cyanopsis, Blume

1. Cyanopsis pubescens, Blume.

Stat. Luzon, in the vicinity of Manila, &c.

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Monosis, St.

1. Monosis insularum, Sp. Nov.

M. fruticosa, laxe ramosa; foliis
oblongis acuminatis repando-
dentatis basi cuneatis in pe-
tiolem attenuatis puberulis
supra glabris subtus ad cos-
tam venasque cum ramis
adpresso-tomentellis; capitulis
corymbosis; pappi setis rigidis
vix denticulatis, majoribus
apice clavatis.

Hab. Tonga and Feeje Islands,
(No indication of the Stations, St.)

A shrubby plant, with
spreading or sarmentose branches;
the younger ones whitened with a

Stetson
Hymn with music (Cass.)

fine ^{and} close-pressed tomentum,
Leaves alternate, membranaceous,
oblong, ovate-oblong, or lanceolate-
obovate with a slender acumination,
coarsely repand-toothed, cuneate at
the base, 3 to 5 inches long, one or two
inches wide, glabrate and green
above, minutely pubescent and
cinereous beneath, the strong mid-
rib and the rather prominent
primary veins tomentulose like
the branchlets. Petiole two thirds
of an inch in length. Heads
^{usually fascicled in threes or fives and}
^{collected} rather numerous, ⁱⁿ small and
somewhat simple, naked, convex,
corymbs or cymes, which are
terminal or from the upper axils,
much shorter than the leaves,
on peduncles of about the length
of the petioles; pedicels short or
none. Involucre cylindraceous;
the scales imbricated in three or four
ranks, somewhat pubescent and
glandular ^{on the back and yellow-ciliate,} ~~nervules~~, rather obtuse;

the outermost short and ovate,
the inner oblong ^{and varying to} oblong-lan-
ceolate. Flower solitary, at length
nearly twice as long as the invo-
lucre. Corolla purple; ^{glabrous} the linear
lobes as long as the cylindrical
tube. Anthers sagittate in the
manner described by Steud., i.e.,
~~the filaments inserted above their~~
~~base~~ dorsally attached to the fil-
ament above their base, the basal
lobes obtuse ^{and} ^{pollen glabrous, echinulate} polliniferous, as
in other Vernoniaceae. Style as
in Vernonia, but its base not
at all thickened, and girt by a
narrow cupuliform nectary or
disk. Achenium cylindrical,
slightly narrowed downwards, 10-
ribbed, glabrous, beset with gran-
ular atoms. Pappus of very
stiff and rigid, obscurely dentic-
ulate bristles, a few of the outer-
most shorter and slender, another
series slightly thickened toward the
summit, the innermost rather

longer and stouter, nearly equalling
the corolla, and very manifestly
clavate - thickened upwards.

This appears to be a true
congener of Morrisia Nightiana,
Dc., the type of that genus. It
stands in nearly the same relation
to Synanthemon, Cass., that
the section Eremosis does to Ner-
monia.

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Albertinia, Sprang.

1. Albertinia Brasiliensis, Sprang.

Albertinia Brasiliensis, Sprang. Syst.
3. p. 355; DC. Prodr. 5. p. 80; Seless.
2c. Del. 4. t. 4.

Nervaria platycephala, Gardner in
Lond. Jour. Bot. 5. p. 212, no. 5508.

Symblomeria Baldoviniana, Nutt.
in Trans. Amer. Phil. Soc. n. ser.
p. 284, ex char.

Hab. Brazil, on the Corcovado,
S. near Rio Janeiro.

Elephantopus, Linn.

1. Elephantopus scaber, Linn.

Hab. Luzon, near Manilla.

A softly strigose form, approach-
ing the American E. tomentosus,

and yielding confirmation to
the opinion of Schultze that
the five species of the first section
of the genus in DeCandolle's Prodro-
mus are only forms of one.

2. Elephantopus riparius, Gardn.

Elephantopus riparius, Gardn., in
Lond. Jour. Bot. 6, p. 426.

Hab. Brazil, in the Organ
Mountains, near Rio Janeiro.

3. Elephantopus (Elephantosis) angusti-
folius, Swartz.

Hab. Brazil; with the preceding
species.

4. Elephantopus (Pseudelephantopus) spic-
atus, Berth., Juss.

Hab. Luzon, near Manila. Prob-
ably introduced from tropical America.

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Paranephelium, Poepp. & Endl.

1. Paranephelium uniflorum, Poepp. & ^{Endl.}

Var. α . pinnatifidum: foliis lyrate-
pinnatifidis, lobis inciso-den-
tatis, pagina superiore nunc
levi nunc bullata.

Paranephelium uniflorum. Poepp.
& Endl. Nov. Gen. & Sp. 3. p.
42, t. 248; Wedd. Chlor.
Ind. 1. p. 213.

Var. β . bullatum: foliis late ovatis
basi truncatis seu obovatis
inequaliter dentatis supra
bullato-rugosis nunc glabris
glabrisve nunc pilis visco-
sis hirsutis, petiolis ad mar-
gines saepe quandoque den-
ticulatis.

Paranephelium bullatum, Gray,
ind.; Wedd. l. c. p. 214.

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Var. γ . ovatus: foliis ^{subrotundis} ovatis / obovatis
vel subspathulatis inaequaliter
dentatis, rarius basim versus
incisis, ~~supra levibus et~~
~~glab~~ pagina superiore
levi et glaberrima, petio-
lo nunc denticulato.

Paranephelium ovatifolium,
Gray ined. in Herb. Hook,
& Mus. Par.

P. ovatus, Wedd. l.c. p. 214,
t. 37.

Hab. Andes above Baños,
Peru. (α & γ .); var. γ . also at Casa
Bancha; and var. β . at Alcamarea,
in the high Andes.

Mr. Weddell, as well as
myself, had distinguished these
three forms as species; but an atten-
tive examination of various speci-
mens leads to the conclusion that
they are all forms of one, differ-

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ing only in foliage, ~~and~~ pubes-
cence, and the like. In all the
leaves are white-tomentose beneath,
the tube of the ligula hirsute; the
outer scales of the involucre spat-
ulate, or even obovate, and ob-
tuse; the inner ones lanceolate or
linear and acute. The bullation
of the leaves is evidently variable,
and the shape of the leaves is not
reliable for a specific character,
especially where ^{occasional} the denticulati-
ons of the narrow margins of the
petiole show a tendency toward
a lyrate ~~leaf~~ lamina. In
addition to the stations recorded
by Weddell, the typical *P.*
uniflorus was gathered by Rutland
on the high Andes in the south-
western part of Peru; the var. *bullatus*
^(I believe) at Chacabayas by Matthews;
and the var. *ovatus* by McLean
(Hb. Hook.).

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Liabrum, Adans., Less.

1. Liabrum lyratum, Sp. nov.

L. herbaceum; foliis supra hirsutiusculis glabratissime subtus arachnoideo-tomentosis, caulibus lyrato-lobatis petiolorum basi auriculatis, ~~conis~~ plerumque connatis, summis sessilibus basi dilatata connatis, bobo terminali maximo subinciso et repando-denticulato; pedunculo terminali elongato + ~~3-cephalo~~; mono-oligocephalo; involucri squamis oblongis substriatis; pappo e setis paleolisve rigidis inaequalibus, exterioribus dimidio brevioribus.

Alibum liabroides, Less.

Syn. p. 152?

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Stat. Obrajillo, Andes of Peru.

The character is taken from an imperfect specimen in this collection and from one in the Peruvian collection of Matthews, no. 3057. In both the heads are injured by insects so that the whole structure cannot well be made out. I suspect, however, that they may be identical with the Alibum liaboides of Lessing, incompletely characterized from fragmentary specimens gathered by Humboldt, and left unnoticed by Kunth.

If this be so, the genus Alibum cannot stand upon the characters indicated. For the pappus is ^{apparently} ~~really~~ similar in the disk and ray, and ^{the exterior} not really coro=

~~Scabum, Sp. Nov.~~

~~Scabum, Sp. Nov.~~

~~Scabum, Sp. Nov.~~

~~Scabum, Sp. Nov.~~

uniform. And the plant nearly
accords with Liatrum, in the extended
sense, or with Andromachia sect.

Pleionactis of DeCandolle, except
that the bristles of the pappus are
more stout and rigid, and also
fewer. They are fragile, however,
as well as deciduous, and some-
times break off near the base;
and the margin of the summit of
the acheneium, on which the
pappus is inserted, appears somewhat
like a short crown. The bristles
form about two series, the outer
ones more subulate, and barely
half the length of the inner. Prae-
ny minute on the angles. Ache-
nia oblong-oval, thick, obscure-
ly angled, smooth and glabrous,
with a depressed terminal areola.
Whether the receptacle is naked or
finetubilliform cannot be made out.

Head ^{large,} solitary or ^{naked} on a peduncle as
long as the leaves, or two or three
short-peduncled ones on the pro-
longed and naked summit of the
stem. Scales of the involucre im-
bricated in about three series, 3
or 4 lines long, more or less evident-
ly nerved or striate, the outer
ones oblong and obtuse or acute,
the inner varying to lanceolate
and mostly cuspidate-acumi-
nate. Rays 30 or more;
~~ligules~~ ligules linear, yellow,
half an inch long, toothed at the
extremity, towards the base minute
underneath, as well as their base.
Basal leaves from 3 to 7 inches
long including the petiole;
the terminal lobe large and
deltoid, acute, repand and den-
tulate, often incised or toothed;
the lateral lobes much smaller,
about two pairs. The uppermost
pair of leaves sessile by the
connate-auricate base, above which

it is contracted, then deltoid-dilated or somewhat hastate, or with a pair of small lateral lobes. Root and base of the stem not seen; but the plant is probably a low herb, ~~about~~^{only} a foot or two in height. The young stem is clothed with a thin, floccose, and deciduous tomentum, like that of the lower surface of the leaves; under this it is glabrous or ~~near~~^{near} the summit glandular-pubescent.

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Piqueria, Cav., Gardn.

1. Piqueria artemisioides, H.B.K.
2. Piqueria floribunda, DC.
3. Piqueria quinqueflora, Cass.

Stat. Peru, between Lima and Obrajillo.

Ageratum, Linn.

1. Ageratum conyzoides, Linn. &

Var. β. muticum; pappi paleis omnibus
muticis obtusis aut 1-2 longiori-
bus subaristatis.

Stat. Madeira, Rio Janeiro,
Heije Islands, Hawaii, Sandwich Is-
lands, St. Helena, Doubtless of

American origin, but now dis-
persed over the warmer parts of the
world. The variety was gathered at
Lima, Peru, except in the complete
or partial absence of the awns
of the pappus it does not differ
from some of the common forms of
A. conyzoides. Regel's A. brachy-
staphanum is probably the same
thing.

Adenostemma, Forst.

1. Adenostemma viscosum, Forst.

Adenostemma viscosum ^{A.} glutinosa
Dc. Prodr. 5, p. 110.

Lavenia erecta & L. glutinosa, Gandich.
Bot. Voy. Freyc. p. 470, 471.

Hab. Tahiti, Society Islands, Upo-
lu and Manna, Samoan Islands,
Fiji Islands, Oahu, Sandwich Is-

and.

Forster's and DeCandolle's A. viscosum is only a form of DeCandolle's A. glutinosum with thinner and narrower leaves, probably growing in more shady places. To this common Polynesian ^{Adenostemma} ~~species~~ a great number of nominal species are probably to be reduced.

2. Adenostemma latifolium. Don?

Lavenia macrophylla, Blume, Bijdr.
p. 905. Adenostemma macro-
phylla, DC. l.c.?

Hab. Tania, Feeje Islands.

This is perhaps only a variety of the preceding with larger leaves (broadly ovate and 5 or 6 inches long), and nearly smooth achenia. It accords pretty well with what I had named A. latifolium from the Socorro

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Islands, with Burnings's no. 1749 from
the Philippine Islands, and with
a Himalayan specimen, collected by
Edgeworth, and named A. latifolium
by Sir Wm. Hooker.

Stevia, Car.

1, Stevia tracheloides, Db.?

Stab. Peru, ^{at} near Baños, Obrajillo,
Hs.

Accords very well with Berlandier's
plant from Toluca, except that the
leaves are smaller. Perhaps it is also
~~S. ovata, Lagasca~~ The pappus is
minute.

2, Stevia oligocephala, Db.

Stab. Brazil, in the Organ
Mountains near Rio Janeiro.

Bip.

3. Stevia melissae folia, Schultze,
Eupatorium melissae folium, Lam.
Dict. 2. p. 411.

Mikania melissae folia, Willd. Spec.
3. p. 1747.

Nothites latifolia, Cass. Dict. Sci.
Nat. 35, p. 163.

Nothites melissae folia, DC. Prodr.
5. p. 186.

Stevia subcorymbosa, Lag. Nov.
Gen. Spec. p. 27; Spreng. Syst.
3. p. 448; DC. Prodr. 5. p. 122.

Stevia puberula, Hook. Bot. Misc.
2. p. 225.

S. dodecacheta, DC. Prodr. 5. p. 122.

S. melissae folia, Schultze, Bip.
in Linnaea, 25. p. 291, nom.
tantum.

Var. β . glabella; foliis basi angus-
tatis cuneatisve, caulinis pl. m.
petiolatis.

Nothites petiolata, Cass. l.c.;
DC. l.c.

Stevia petiolata, Schultze, l.c.
(in Linnaea,

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Stab. Obrajillo, Peru: the
variety with petiolate leaves.

This is evidently the Stachys
petiolata of Cassini, and I pre-
sume no more than a variety
of his S. latifolia, for which De-
Candolle restored the ancient specific
name of melissifolia. The brief
character and habitat of Lagasca's
Stevia subocto aristata point to
this species; although all except the
"puppo 7-9- aristato: Stab. S. ovatae
simillima" of Lagasca is sup-
plied by Sprengel, probably by trans-
ference from S. ovata, on the strength
of the asserted resemblance. ~~Stachys~~
But this specific name, though
the prior one in the genus, is rather
inappropriate, as well as sesquipedali-
an, the avars of the puppos being
usually ten or eleven, or more; so
it will give place to the much earlier,
Lamarckian name, which has

already been suggested by Schultze,
when he ~~proposed~~ ~~detected~~ discovered
that Cassini's genus Whites con-
sists of multiaristate Stevia.
Stokes's S. puberula came from
Chajillo, and is not specifically
distinct from our plant; and
DeCandolle's S. dodecachata is
fully clearly of the same species.

4. Stevia satureiaefolia, Schultze, ^{Mip.}
Eupatorium satureiaefolium, Lam.!
^{Dict. 2. p. 411. Willd. Spec. 3. p. 1747.}
Mikania satureiaefolia, Willd. Spec. 3. p. 1747.
Whites angustifolia, Cass. l.c.
et N. satureiaefolia, Sb. l.c.
Stevia multiaristata, Spreng.
Syst. 3, p. 449; Hook. & Arn.!
Comp. Bot. Mag. 1. p. 238.

Hab. Rio Negro, North Patago-
nia.

Here the identification is perfect
and the older name should be restored.

The auras, or rather setae, of the pappus are barbellulate, and vary from 15 to 22 in number; there are often a few shorter and squamulate ones, or short paled, and occasionally one of the exterior flowers has a short and paleaceous pappus without any setae. No doubt this and the allied species are inseparable from Stevia.

Notthites breviflora, the remaining species of Cassini, is evidently Stevia aristata, Don, and probably S. Nervica, DC., as Hooker and Arnott suggest.

Conoclinium, DC.

1. Conoclinium betonicaforme, DC.

Hab. Brazil, in the Organ Mountains near Rio Janeiro.

Alfred Russell Wallace, F.R.S.
~~The Cambridge Library~~
London.

Sp. Nov.

2. Conoclinium subglutinosum,

C. glabrum; caulibus basi suppre-
tiosis; foliis longe petiolatis
^{late} deltoideo-oratis acuminatis
serratis membranaceis ~~3-5~~
triplici-quintuplinerviis utrin-
que subglutinosus; corymbo
polyccephalo; involucri squamis
~~bicarimatis~~ ⁽¹⁰⁻¹³⁾ dorso subglutinosus
bicarimatis, exterioribus oratis,
intimis spatulatis acutis;
achenio glaberrimo.

Hab. Brazil, near the base
of the Organ Mountains.

This may have been des-
cribed as an Eupatorium, but I
cannot identify it. It some-
what resembles Gardner's Eupato-
rium nudum, from the same

district. In habit and foliage
it resembles E. ageratoides; but
the stems are evidently woody at
the base, and the receptacle is
acutely conical. Petioles slender,
one or two inches in length, not
much shorter than the broadly
ovate blade, which is ^{very} obtuse or
truncate but not at all cordate
at the base, and moderately toothed.
Ovary ^{naked, rather dense,} pedunculate, ^{where}
campanulate. 2 lines long, a
little shorter than the flowers; its
principal scales remarkably broad.
Flowers 25 or more in the head.
Corolla white or flesh-color. Pap-
pus, achenia, &c. as in the genus.

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Stebelinium, St.

1. Stebelinium macrophyllum, var. rivale, ^{St.}

Stab. Brazil, in the Organ Mountains
near Rio Janeiro.

Campuloclinium, St.

1. Campuloclinium macrocephalum, St.

Stab. Base of the Organ Mountains,
near Rio Janeiro, Brazil; in marshes.

To this species Eupatorium Doni-
annum, Hook. & Arn. in Comp. Bot. Mag.,
p. 243, is to be referred. Some of the
lower leaves are opposite. The receptacle
is convex-conical and papillose-serrulate.
Setae of the fuscous pappus between
scabrous and barbellate.

Eupatorium, Tournef.

1. Eupatorium conyzoides, ^{Vahl;} var. Maximiliani.

Eupatorium lineatum, "Hook. & Arn. in
Comp. Bot. Mag." ex herb. Hook. ! forte
E. conyzoides? Op. cit. i. p. 240.

E. Maximiliani, DC. Prodr. 5. p. 143.

Stat. Brazil, in the vicinity of
Rio Janeiro.

I am confident that E. Maximiliani is no more than a form of E. conyzoides, at least of the species figured by Schrank under this name, to which E. divergens, Less. must also belong. The striated ~~seales~~ ^{of the involucre,} and whitish coriaceous scales with very obtuse subherbaceous tips, mark the species. Of E. Maximiliani it can only be said that it is a form with rather larger heads and usually more numerous

flowers, and with narrower and
more serrated leaves. E. cony-
zoides, var. glabrescens, of Steud.,
in the Botany of the Herald, can-
not well be of this species, but is
nearer E. odoratum (notwithstanding
the obtuse scales), probably Deban-
dolle's var. Cubense.

2. Eupatorium propinquum, DC.?

Hab. Rio Janeiro, Brazil. An
imperfect specimen.

3. Eupatorium persicifolium, A.B.K.

Eupatorium persicifolium, A.B.K., Mr.
Ben. & Spec. 4, p. 130.

E. compactum, Benth. in Bot. Voy.
Sulph. p. 112.

Hab. Obrajillo and Culluay, ~~Andes~~
Peru. Also gathered in Peru by Dombey,
and by Matthews (no. 566), and at Iruamian-
tango by Barclay.

Leaves larger than those described by Kunth, being from $3\frac{1}{2}$ to 6 inches in length, and from one to nearly two inches in breadth, all rounded at the base. Involucre half an inch long. The heads in Benthian's E. compactum are smaller than in Humboldt's plant and our own, but otherwise the same. The species is nearly allied to E. arbo-
reum, A.B.K., and also to E. buddle-
ifolium, Benth., which is certainly E. discolor, DC. and probably E. salicinum, Lam.; but the leaves are not acute at the base, and the involucre is more imbricated.

4. Eupatorium Salvia, Colla.

Eupatorium reticulatum, Hook. & Arn. Bot.
Beech. Voy. p. 29, & Comp. Bot. Mag.
1. p. 240, non Desv.

Hab. Chili, in the vicinity of Valparaiso.

5. Eupatorium glomeratum, DC.

Stat. Obrajillo, Peru, where it was also gathered by Matthews, (~~Herb. Hook.~~).

The solitary specimen is an imperfect one; but, with the aid of one from Mr. Matthews, in the Hookerian herbarium, it is clearly ascertained to be DeCandolle's E. glomeratum, which Stanke therefore probably gathered in the Peruvian rather than the Chilean Andes. The leaves are all very unequally cordate at the base.

6. Eupatorium Gaudichaudianum, DC.

Eupatorium Gaudichaudianum, DC. Prodr.
5, p. 448.

~~Eupatorium~~ vagum, Gard. in Hort.
Lond. Jour. Bot. 5, p. 477.

Stat. Brazil, in the vicinity of Rio Janeiro. Probably common, as it was collected by Sellow and Pohl, as

~~all removed at the base of the trunk~~
~~half an inch long.~~

well as by Gaudichaud and
Gardner. From our specimen
one would suppose the stem to
be herbaceous.

7. Eupatorium glabrescens ^(l.c.) (D.C.)

Stat. Organ Mountains near
Rio Janeiro, Brazil. A single speci-
men.

8. Eupatorium laeve, D.C. l.c.

Stat. Vicinity of Rio Janeiro,
Brazil; where it is evidently common,
having been gathered by most
collectors.

9. Eupatorium glabrum.

Bulbostylis glabra, D.C. Prodr. 5, p.
139.

Hab. Brazil, in the vicinity of Rio Janeiro, where it was also gathered by Vauquier, Lobb, Burchell, and Gardner as well as by Gaudichaud.

As long since remarked (in Plante Wrightiana, l. p. 87) this and the nine additional ~~species~~ Brazilian species described by Gardner, having pentagonal achenia, ^{(without intermediate ribs,} are true Euporia. The present species is clearly allied to E. glabrisculum and E. Vauquierianum.

10. Eupatorium glechonophyllum, Less.

Hab. Chili; abundant in the vicinity of Valparaiso.

11. Eupatorium Sternbergianum ^{Ag.}

Hab. Peru, in the vicinity of Obrajillo.

12. Eupatorium vallincola, Db.

Hab. With the preceding. A single, incomplete specimen, with accords pretty well with the character of this species.

13. Eupatorium decipiens, Hook. & Arn.

Eupatorium decipiens, Hook. & Arn. in Bomp. Bot. Mag. 1, p. 240, & 2, p. 251.

E. foliosum, Db. Prodr. 5, p. 174.

Ophryosporus triangularis, Meyen, It. 1, p. 402; Walp. Kil. Meyen, p. 256.

Hab. Peru, in the vicinity of Yanga.

A very imperfect specimen, but apparently the same as the Chilean plant, — for which the older name is preferred. A close ally of this, and equally inseparable from Eupatorium, notwithstanding the

barbellate peta of the pappus,
is E. paradoxum, Hook. & Arn. l.c., the
Whites baccharidea, DC.

Mikania, Willd.

1. Mikania diversifolia, DC. ? &
2. Mikania umbellifera, Gardn.

Hab. Brazil, near Rio Janeiro.

3. Mikania laxa, DC.

Hab. Peru, at Callao, Lima,
and Yanga.

The panicle is smooth; otherwise
the plant accords with DeCandolle's
character of this species. Some of the
leaves incline to repand-crenate. Probably
it is also M. variabilis of Meyen and Walpers.

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4. Mikania volubilis, Willd.

Hab. Luzon, in the mountains
near Baños.

This is nearly allied to the North
American M. scandens, as Willde-
now and DeCandolle remark.

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Chilistrichum, Cass.

1. Chilistrichum amelloides, Cass.

Chilistrichum amelloides Cass. Bull.
Philom. & Dict. Sci. Nat. 8. p. 576,
(excl. var. r.)
Dc. Prodr. 5. p. 266; Hook. 2c.
Pl. 7. 485; Hook. f. Fl. Antarc. 1,
p. 304.

Amellus diffusus. Forst. Bern. Goett.
9. p. 39.

Aster Magellanicus. Spreng. Syst. 3,
p. 526.

Hab. Orange Harbour, Fuegia.

A characteristic shrub of Patagonia, Fuegia, and in the Falkland Islands, where, according to Dr. Hooker, it is the tallest dicotyledonous plant, except the rare Veronica. It attains the height of four or five feet, and forms a brushwood along the banks of streams. The genus differs from Eu-

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rybia merely as do the paleate
from the epaleate species of Corethro-
gyn; ~~and the~~ from Diplostegium
of the Andes, by the same mark,
and by the simple pappus.

Eurybia, Cass.

1. Eurybia (Shavina) furfuracea, St.

Aster furfuraceus, A. Rich., Fl. N.
Real. p. 246.

Eurybia furfuracea, St., Prodr.
5, p. 1267; Hook. f., Fl. N. Real. 1,
p. 1117.

Staxtonia furfuracea, A. Cunningham, Fl.
N. Real. ~~Prodr.~~

Hab. New Zealand at Waiya-rum
Bay, &c.

I believe that this is also, in
part, the Solidago arborescens of Forster.

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(in which DeCandolle's genus Steiractis
was founded),
having been confounded by him
with the nearly related E. nitida,
Hook. f., or Shauvia arborescens of
Raoul. Both are manifest con-
geners of E. Forsteri, Hook. f. (Shauvia
paniculata, Forst.) which was not
met with by our Naturalists.

2. Eurybia Solandri, Hook. f. l. c.
Stat. Waiyaruru Bay, New Zealand.

The achenia, said by Dr. Hooker
to be quite smooth, are not ma-
ture in our specimens, but the im-
mature ones and the ovaries are
sparsely hairy.

Aster, Tourn.

1. Aster Vahlia, Hook. & Arn.

Aster Vahlia, Hook. & Arn. in Comp.
Bot. Mag. 2, p. 49; Hook. & Arn. 486
Hook. f. Fl. Antarc. 2, p. 305.

Erigeron Vahlia, Gaudich. ^{Gay, Fl. Chil. 4, p. 28,} Bot. Frey.
Voy. p. 135; DC. Prodr. 3, p. 295; ^{Gay, Fl. Chil. 4, p. 28,}
E. glabrifolium, DC. l. c. p. 287; ^{Gay, Fl. Chil. 4, p. 28,}
^{Medd. bot. Ant. 1, p. 193.}

Stat. Orange Harbour, Fregia;
extending to Chili, (One of the species am-
biguous between the Alpigenous Asters and
Erigeron.)

2. Aster (Asterastrum)

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Tripolium, Nes.

1. Tripolium conspicuum, Lindl.

Tripolium conspicuum, Lindl. in Ob.
Indr. 5, p. 254; Gay, Fl. Chil. 4, p. 15.

Stat. Chili, in the vicinity of
Santiago, Peru, at Callao and
Lima.

The root is ^{really} ~~not~~ perennial, as is
stated in the Flora Chilensis. I have
seen specimens from Lima exactly
like those from Chili. But those
of this collection have mostly smaller
heads, ~~and~~ more slender ^{and} glabrous achenia,
and ~~slender~~ narrower and pointed
involucral scales.

2. Tripolium divaricatum, Nutt., var.
Sandwicense.

Aster subulatus, Less. in Linnaea, b. p.
120, non Michx. (p. 254.)

Tripolium subulatum, var. Ob. Indr. 5, p.

Erigeron multiflorus, Hook. & Arn.
Bot. Beech. Voy. p. 87, 4 spec. in
~~auth.~~ herb. Hook.

Hab. Sandwich Islands; on the
Coast of Oahu and Kauai.

Erigeron, Linn.*

1. Erigeron chionophilum, var.
sericeum, Wedd.

Erigeron chionophilum β . sericeum,
Wedd. Chl. And. 1. p. 191.

Hab. Andes of Peru above Baños.

2. Erigeron hieracioides, Wedd.

Erigeron hieracioides, Wedd. Chl. And.
1. p. 194, t. 34.

Hab. Andes of Peru, above Baños.

* Erigeron liatroides, Turc., if it be,
as I think, a plant of Drummond, which
I formerly examined in herb. Hook., is a
congener of E. decurrens, DC., and a
synnema.

Cullumay, &c. A dwarf state of
the species; ^{with} the flowering stems
scarcely exceeding the rosulate
radical leaves, the cauline leaves
somewhat spatulate and ~~three~~
three-toothed at the truncate
~~apex~~, Mr. McLean also
gathered it in the Peruvian
Andes.

3. Erigeron leptorhizon, DC.

Erigeron leptorhizon, DC. Prodr. 5,
p. 288.

Var. β , canescenti-villosum vel hirsutum;
caulibus basi lignescentibus de-
cumbentibus.

Var. γ , gracile, hirsutum; foliis par-
vis integris narove dentatis, imis
spathulatis, summis fere lineari-
bus.

Hab. Coast of Peru: var. β ,
on the island of San Lorenzo: var.
at Lima.

Dornber's specimens are young, flowering directly from the seed, and with a slender root. Ours are more pubescent, even caespitose, and with a stouter root, &c. in the var. β , even lignescens, as is the base of the decumbent stem, but probably of only annual duration. They are older specimens, indicated by double. The proppus is simple. The var. γ , having smaller heads, and much smaller and narrower, mostly quite entire leaves (the radical ones 5 or 6 lines, the upper cauline 2 or 3 lines, in length), is ~~from~~ perhaps a distinct species; but I think not. Both forms were collected at Lima by Cuming, no. 1083.

4. Erigeron Berteri anum, Det. l.c.

Erigeron canescens & E. stenophyllus
var. β . Hook. & Arn. in Comp. Bot.
Mag. 2, p. 49, 50 & p. 254

Stat. Chili; common around Valparaíso.

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This species is well described by Hooker and Arnott, but not by De Candolle, whose character is adopted without correction in the *Flora Chilena*.

5. Erigeron andicola, Sl.

Erigeron andicola, Sl. Prodr. 5, p. 287; Wedd. Chl. And. 1. p.

E. ¹⁹² Gayanum, Penny in Gay, Fl. Chil. 4, p. 25, } Wedd. Chl. And. l.c.?

Aster Gayanus, Sl. Prodr. 5, p.

²²⁷
A. Gilliesii, Hook. & Arn. Comp. Bot. Mag. 2. p. 49?

Stat. Andes of Chili, above Santiago. A poor specimen, the flowers all fallen from the solitary heads.

6. Erigeron palustre, Gardn.
Erigeron palustre, Gardn. in Hook.
Lond. Jour. Bot. 4, p. 123.

Stat. Organ Mountains near Rio
Janeiro, Brazil.

This is probably not distinct
from E. sulcatum, DC. (not of
Neyen); and ~~belongs to the~~ ^{might be ranked in} same
section of the genus as the North
American E. speciosum, V.

7. Erigeron (Canthus) triplinerve.

Coryza tripplinervia, Less. in Lin-
nea, 6, p. 137; DC. Prodr. 5, p. 377.

Stat. Brazil, in the Organ Moun-
tains near Rio Janeiro. A single,
insufficient specimen.

8. Erigeron (lanceus) chilense,
Don, & Steud.

Gnaphalium Chilensis, Sprung.; Less.;
Bl. Prodr. 5, p. 378; Kuny in
Fl. Chil. 4, p. 70.

G. longifolia & G. procera Desf.
Cat. Hort. Par.

G. Scabiosaefolia ~~& G. Austrochilensis~~,
Kunz, l.c.

Hab. Brazil, near Rio Janeiro,
and at the base of the Organ
Mountains.

9. Erigeron (lanceus) artemisioides,

Gnaphalium artemisioides, Meyer & Walp.
Rel. Meyer. p. 262.

Hab. Andes of Peru above Baños.

Allied to G. pinnatum Turcz.,
but manifestly distinct. The stems
are decumbent, about a foot in length.

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Leaves deeply pinnatifid; the lobes 4 or 6, very obtuse, oval or oblong, mucronate. Heads forming an interrupted spicate raceme or condensed panicle; the pappus rufoous. A second specimen has fewer, and consequently rather larger heads, with the pappus barely fulvous, much longer than the female flower, the corolla of which is tubular with a toothed unilateral tip.

9. Erigeron (bentus) pistellum DC.

Erigeron pistellum, DC. Prodr. 5, p. 290; Kemy in Gay Fl. Chil. 4, p. 30.

E. spiculatus, Hook. & Arn. Comp. Bot. Mag. 2, p. 49, pro parte, non Bot. Beech.

E. sulcatum Meyer, Hb.; Walp. Bot. Meyer. p. 260.

Coryza Larrainiana & C. andina, Kemy in Fl. Chil. l.c. p. 71, 73.

Hab. Chili, in the vicinity of Valpa-
raiso.

A well-marked, low species, with the stems branching from a ligneous and apparently truly perennial root, bearing a few loosely corymbose and rather large heads.

10. Erigeron (canthus) linifolium, Willd.
~~Bonariense, Linn.~~

Coryza ambigua, DC. Fl. Fran.
+ Prodr. 5. p. 387.

C. sinuata, Ell. Sk. Bot. S. Car. 2,
p. 323.

Erigeron Bonariense, DC. Prodr. 5. p. 289, pro parte, ~~for~~
~~seen in Brazil, 1861, p. 217.~~

Itab. Madeira. Chili, near Val-
paraiso. Tippona, New Zealand: probably
of recent and local introduction, as it is
not noticed by ^{but Raven also collected it.} Dr. Hooker; Most likely
not originally European, nor American.
~~Dr. Harvey gathered it at the Friendly, and~~
~~Dr. Schumann, on the Feejee Islands~~

~~H. Erigeron (canthus) floribundum.~~

~~Coryza floribunda, H.B.K., Nov. Gen. 9~~

11. Erigeron (Canotus) albidum.

Gnysia albida, Willd.; Spreng.
Syst. 3, p. 514; Less. in Linnaea,
6, p. 136; DC. Prodr. 5, p. 378.

G. diversifolia, Minn. ex DC. l. c.?

G. erigeroides, DC. l. c. p. 378, ~~forma~~
~~ex cinerea?~~

G. floribunda, H. B. K. Nov. Gen. & Spec.
4, p. 73; DC. l. c. p. 380; Stuebe in
Bot. Voy. Herald, p. 151; forma
capitulis majoribus?

G. chenopodioides, DC. l. c. p. 379?

Erigeron solidaginoides, Schlecht. in
Linnaea, 25, p. 213.

E. Bonariensis, Seem. in Monpl. 1851, p.
257, no. 247.

Stab. Brazil, at Rio, and Organ
Mountains; the latter smoother and with
larger heads, like those of Gnysia floribunda
H. B. K.; also, in the Organ Mountains,
a microcephalous form, with lower leaves
much cleft (G. chenopodioides, DC.?). Peru,

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at Callao, Tahiti, Society Islands.
Dr. Harvey gathered a macrocephalous form
of it at the Friendly Islands, and Dr. Surham
at the Fiesse Islands.

I have not referred all the above
synonyms upon the evidence of auth-
entic specimens; but I suppose that
they are correctly adduced. If so, the
size of the heads varies more than in
~~the~~ *E. linifolium* and *E. Canadense*,
to which two species it is about equally
related. It is evidently Schlechten-
dal's *E. solidaginoides*, which name
might be retained for it, but it is
more proper to fall back upon the
original ~~appellation~~ ^{specific} name. It is now
widely dispersed over the world, but in warmer climates
than *E. Canadense* affects.

12. *Erigeron* (*Caninus*) *Bonariense*, ^{Linnaeus}

Erigeron spiculозus, Hook. & Arn.
Bot. Beech. Voy. p. 32, & Comp.
Bot. mag. 2, p. 49 (excl. var. β),
& p. 254; Hook. f. Fl. Antarc. 1, p.
307.

E. spinulosum, DC. Prodr. 5, p. 289;

Remy in Fl. Chil. 4, p. 29.

E. fasciculatus, Colla, Pl. Chil. 2, p.

26, ex DC.

E. sordidus, Gillies, ex Hook. & Arn. Comp. Bot. Mag.

E. (*Eucalyptus*?) *Lirchleri*, Schultz Bip. in Flora, 1855
Hab. Chili, near Valparaiso.

Rio Negro, North Patagonia; a variety
with narrower leaves and smaller heads;

E. sordidus, Gillies, and the var. ^{of *E. spinulosus*} *minor*
of Dr. Stoker.

From the habitat and from the rude
figure of Dillenius on which the
species was founded, I am convinced
that this is the original *E. Bonariense*.
The rigid setae ^{on the margins of} ~~by which~~ the leaves are
ciliated characteristic. The heads vary
in size, but are always much
larger than those of *E. Canadense*,
as Dr. Stoker has remarked.

13. Eriogonum (canotus) canadense, Lin.

Hab. Valparaiso, Chili, Kanai,
Sandwich Islands.

This is not E. multiflorum, Hook
& Arn. from the Sandwich Islands, as
has been suspected, that being ^a Triptolium.
But Coryza myriocephala and E.
Bilbaviana of Remy, in the Flore Chilena,
are synonyms of E. canadense; - a
species which probably did not originally
inhabit Canada or ~~the~~ any of the
Northern United States, but ~~extended~~
came ^{from a warmer region} northward, as forests were cleared
away and settlements made.

Villadina, A. Rich.

Capitulum multiflorum, hetero-
gamum; floribus radii uni-
pluriseriatis foemineis, disci
(pluribus paucisve) tubulosis her-
maphroditis. ^{lobaticum seu hemisphaericum} involucri ⁱⁿtri-
catum pauciseriale, squamis
^{inequalibus} angustis appressis. Receptaculum
planum, nudum, pl. m. alveo-
latum. Ligula ~~semper~~ ^{seu semper} parva,
tubo ~~suo~~ breviores, nunc exig-
ue stylo ipso breviores. Corollae
disci tubulosa, 4-5-dentata.
Antherae ~~erigentes~~ Euasterine-
arum. Styli rari, fl. herm.
^{superne elongato, subulato hirtelli.}
~~anguste lineares in appendicem~~
~~gracilem subulatam hirtellam~~
~~producti.~~ Achenia compressa,
striata, vel 4-6-costata, ~~raro~~
~~tantum~~ ^{vel tantum} marginato-bicostata
lateribus ^{enerviis} ~~striatis~~, disco apice
sepius contracto, disco epigyno parvo. ^a
Pappus

simplex, coniformis, e setis capilla-
ribus scabris ~~uni-plura~~^{paucis} serialibus.
— Suffrutices vel herbae ^{sepius} basi
fruticosae, Oceanica; cauli-
bus ramosis plerumque foliosis-
simis; foliis alternis; integris
~~dentatis~~; capitulis nunc solita-
riis ~~paucis~~^{ramos} terminantibus nunc
corymbosis; ligulis albis vel pur-
pureis.

Vittadinia, A. Rich. Bot. Voy.

Austral. Fl. N. Z. (1834) p. 250;

Hook. f. Fl. Tasman. p. 181.

Tetramolopium, Nees, Bot. (1833),

p. 202, pro parte.

Vittadinia, Tetramolopium sect. 1, &

Eurybiopsis, DC. Prodr. 5, p. 260,

262, 280.

Eurybiopsis, and DC., is ^{essentially} ~~fully~~
identical with the older genus Vit-
tadinia, ^{A. Richard,} and has been referred

to it by Dr. Stoker. The only difference observable is that the faces of the achenia of Eurybiopsis macrorhiza, if I rightly identify the plant, are nerveless, those of Vittadinia striate-nerved. There must now be added to the genus several Hawaiian species, one of which is strictly an Eurybiopsis; another, ^(in part) the type of Tetramolopium, Nees, differs only in its less copious, uniserial pappus, and in the shorter, mostly four-ribbed achenia; while others, with corymbose and still smaller heads, have decidedly pluriserial ^(with more reduced) rays, ~~so reduced that they are shorter than~~ ^{the pappus or even} ~~sometimes even shorter~~ than their styles, and the hermaphrodite flowers fewer, in one instance reduced to unity; — so that these are to Vittadinia proper what the Coryzoid Erigeron are to Stenactis ^(to true) or Erigeron. The genus, thus extended, while ~~on the~~ ^{by its larger-flowered species} ~~is~~ ^{now} nearly related to Eurybia (from which, as DeCandolle and

Dr. Hooker remarks, it technically
differs only in its compressed achenia,
and nearly congruous with the
group of ambiguous Asters design-
ated under the name of Orthom-
eris by Torrey and Gray, is now
seen on the other hand to be the
analogue of Erigeron. From the
latter, ~~abundantly~~ ~~poly~~ already
too polymorphous genus, Nittadina
would be well distinguished by its
striate or ribbed achenia, and the
slender subulate tips of the branches
of the style, except that, unfortunately,
~~some~~ ~~of~~ ~~the~~ ~~species~~ ~~want~~ ~~the~~ ~~facial~~
ribs nor striae, while ^{a few} ~~some~~ species of
Erigeron, as Weddell regards them,
have long and slender tips to their
styles. ^{and some North American ones have their achenia 4-nerved.} The habit generally is not
that of Erigeron; and the achenia
and the more imbricated involucre
will distinguish those species which
might be confounded with the

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Canoti. The short, but always distinct ligules are characteristic of the genus. Most of the Sandwich-Island species are decidedly shrubby plants, those of New Zealand and Australia woody at the base; but there are at least two Australian species which ~~seem~~ ^{appear} to have annual roots; on the other hand, Erigeron peticosum of Juan Fernandez, which forms a shrub, is apparently a genuine Erigeron. DeCandolle assigns uniserial rays to his Eurybiopsis and the New Zealand Vittadinia, and bi-triserial ones to the Australian Vittadinia: Dr. Storker regards them as uniserial throughout. When numerous and with narrow ligules this character has neither definiteness nor significance, ~~either~~ as is well seen in Erigeron. To both Eurybiopsis and Vittadinia DeCandolle as-

eribes a "pappus uniserialis," a term which he seems not always to have ~~employed~~ employed in the same sense ^{very copious} in the species known to DeCandolle. The bristles of the pappus certainly occupy ^{two or more} ~~several~~ rows, just as in Aster. From these there is a gradual transition to the ^{more} scanty and truly uniserial pappus of N. tenerima and the smaller-flowered species of the Sandwich Islands.

For the genus as thus augmented, the name of Tetramolopium ^{might} ~~may~~ be reclaimed in virtue of priority, as it antedates Vittadinia by a year. But the former ~~genus~~ name was given to two heterogeneous species, - that from the Sandwich Islands, which has long remained very obscure, and that from the Tertiary Andes, which is a Diplostephium ^(and) with which DeCandolle rightly associated ~~two other~~

two other of Humboldt and Kunth's Aster.
The three generic names now brought
together may be retained for sections,
thus: —

1. Villadinia vera. Achenia elongata,
faciebus pluristriatis. Pappus copio-
sus pluriserialis. Ligula pl. m.
conspicua. Capitula majuscula
solitaria.
2. Eurybiopsis. Achenia minus elon-
gata, marginato-binervia, facie-
bus haud striatis. Pappus uni-
pluriserialis. bat. praecedentis.
3. Tetramolopium. Achenia breviuscula,
quadricostata, nempe, costis 2 mar-
ginalibus validis, 2 facialibus an-
gustioribus, his raro inconspicuis,
quandoque geminatis. Pappus uni-
serialis. Capitula nunc solitaria
ligulis breviter exsertis, nunc parva
corymbosa ligulis pluriserialibus discum
haud superantibus, floribus disci paucis vel paucis-
simis.

1. Vittadinia triloba, DC.

N. caule erecto e radice annua
apice subcorymboso cum foliis
spathulatis cuneatisve basi longe
attenuatis superne trilobis vel
tridentatis (ramealibus angustio-
ribus saepius integerrimis) & scabro-
hirtellis vel hirsutis; ligulis pur-
pureis breviter exsertis; acheniis
clavato-linearibus pluristriatis
immarginatis pubescentibus,
maturis involucrio atque pappo
etiam pappo pluriseriali ful-
vo aequilongis. — Variat, foliis can-
linis tripartitis lobis trifidis seu laciniatis.

Vittadinia triloba, DC. Prodr.

5, p. 281, non Hortul. Europ.

Brachycome triloba, Gaud. Bot.

Freye. Voy. p. 467.

Hab. Hunter River, New South

Wales.

This is, I presume, truly the species of Gaudichaud and of DeCandolle, although the stem and leaves are usually more hirsute or hispid than is described: they vary greatly in this respect, as also in the incision ^{and form} of the leaves. The spatulate or cuneate limb of the cauline leaves is generally three-lobed, or furnished with one or two salient teeth, sometimes cleft into three to five deep lobes, or even bipalmately parted or pedate, all tapering into a slender petiole-like base. Heads 5 or 6 lines long, ^{many-flowered.} Ligules Rays uniserial or nearly so: the ligules exerted beyond the coriaceous ~~fulvous~~ pappus, purple or blue, $1\frac{1}{2}$ to 2 lines long, shorter than their slender tube. Achenia narrow, $2\frac{1}{2}$ to 3 lines long, with no thickened ribs at their margins. Bristles of

fulvous pappus soft, more or less unequal in length, evidently occupying several series. The root in our specimens, ~~as in those collected at Moreton Bay by Mrs. Hallard,~~ is plainly annual; which character, along with the commonly lobed or even dissected leaves, and the rougher pubescence, will distinguish the species from the (not aptly named) *N. cuneata* of De Baudelle and Hooker (*Eurybiopsis gracilis*, Hook. f.). To the latter De Baudelle's *N.?* ~~dentata~~ (*Brachycome*, Gandich.) seems likely to belong. ~~Another~~ Mueller and Sonder have united the *N. cuneata*, D.B., ~~and that~~ or at least of Hooker, with the *Eurybiopsis scabrata*, Hook. f., now regarded as *N. scabra*, D.B., under the name of *Eurybiopsis* or *Vittadinia Hookeri*; but Mueller's plant, at least the variety

angustifolia, which accords pretty well with the character of DeCandolle's N. Scabra, is distinguishable by its less copious and shorter pappus, and by the ~~stronger marginal ribs~~ ^{less} attenuated achenia being ^{considerably} evidently margined by ribs ^{much} stronger than the facial nerves.

The plant which was generally ~~cult~~ cultivated in European botanic gardens a few years ago under the name of Vittadinia triloba, and which Dr. Sonder, mistaking

it for the genuine Australian plant, has (in the Hamb. Gart. & Blumenzeitung, 12, p. 78) described as Erigeron trilobum, is manifestly DeCandolle's Erigeron mucronatum of Mexico and Venezuela.

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J. Muell. ined.

2. Nittadinia (Eurybiopsis) hispidula,

N. undique scabro-hispida sen
hispidula; caule erecto e radice
anua stricto oligocephalo;
foliis caulinis linearibus sessilibus
imixte spatulatis paucidentatis;
ligulis e pappo leviter exsertis; ache-
nis ~~obovatis~~ appresse-histellis obo-
vatis apice breviter acutatis ~~sen~~
marginibus nervis crasso cinctis faci-
ebris enerviis pappo fere uniseri-
ali brevioribus.

New South Wales, with
Itab. } With the preceding species.

A ~~strict~~ rough-pubescent plant,
with a strict stem, one or two feet
in height, from an evidently annual
root, both in our single specimen
and in one from Dr. Mueller's Tropical
Australian collection, from Gilbert
River. Leaves, except the lowest,

much less tapering downward than
in the foregoing, mostly linear, an
inch or more in length and $1\frac{1}{2}$ to
 $2\frac{1}{2}$ lines wide, commonly with one
or two salient coarse teeth on each
margin. Peduncles naked. Heads
smaller than in the preceding, 4
lines long; the ray flowers apparently
more numerous in proportion (biserial?),
and their ligules ~~rather~~ smaller,
barely exerted from the fulvous pap-
pus, which nearly accords with De-
boulle's character of *Eurybiopsis* in
being nearly uniserial, at least
it is much less cyprian than in
V. triloba, ~~than~~ or even than in *V. scabra*.
Achenia not quite a line and a
half in length, flat, obovate with
a tapering base, abruptly contracted
at the apex into the small epigynous
disk which bears the pappus, furnished
with a conspicuous callous nerve ^{or rib}
upon each margin; the faces not at

striate or nerved, ~~excepting~~ excepting sometimes faint traces of a mid-nerve towards their base. Pappus soft, one third longer than the achenium.

V. (Eurybiopsis, DC.) macrohiza, - if De Baudolle's species is rightly identified with Dr. Mueller's specimens from "Providence Hill", - considerably resembles dwarf and very narrow-leaved forms of V. scabra, but the faces of the achenia are nerveless as in V. hispidula. The immature achenia are linear, and nearly as long as the pappus which is more copious than in the latter.

3. Vittadinia (Eurybiopsis) humilis, ^{Sw.} sp. n.

V. suffruticosa, e basi crassa multicaulis, spithamea; caulibus foliosisissimis; foliis anguste spathu-

latis integerrimis undique hispi-
dis histellisque aveniis, costa
subtus ~~per~~ incrassata; pedun-
culis brevibus solitariis vel subum-
bellatis; ligulis uniserialis flo-
res disci (6-12) vix superantibus
stylis duplo longioribus; acheniis
lineari-oblongis ^{marginato-} binerviatis
histellis estriatis pappo subtri-
seriali inequali dimidio
brevioribus. — Variat foliis hisu-
tioribus ^{ibus} vel subglabratis, nunc fore-
linearibus basi longe attenuatis,

Hab. Sandwich Islands; on the
mountains of Hawaii (Mouma
Loa, Mouma Kea, at the elevation
of 8000 feet and more, H.); also
~~Mauai~~, on the banks of the crater in
the eastern part of Maui. Collec-
ted also by Kemy upon Hawaii.

Stems ^{mostly erect,} 4 to 8 inches high, woody, usually very numerous and crowded on a thick woody base or caudex, apparently forming dense tufts. Somewhat hispid, very leafy throughout their whole length, the leaves often almost imbricated on the younger ~~shoots~~ or sterile shoots. Leaves narrowly spatulate or linear. Spatulate with a slender ~~base~~ gradually attenuate base, about half an inch long, obtuse or acutish, thickish and rather rigid, veinless, but with a strong midrib with is salient underneath and impressed above, either densely or sometimes ^{rather} sparsely ~~hispid~~ and minutely hispid, usually appearing cinereous. Peduncles terminal or alar, ^{either single or 2 to 4 together,} about half an inch long, sometimes an inch long, sometimes hardly any, ~~the~~ when developed

rather filiform, minutely granular-scabrous, bearing one or two scattered and minute subulate bractlets. Heads nearly obconical, 4 to 6 lines long. Involucre about half the length of the disk at maturity, ~~rather~~ ^(16 to 20) ~~the~~ the scales unequal, rather loosely imbricated, lanceolate-linear, acute, strongly one-nerved, minutely granular-scabrous. Ray-flowers 10 or 12; the corolla purplish, the tube 2 lines long, nearly equaling the pappus; the ligule scarcely ~~more~~ above a line in length, linear-oblong, minutely tridentate at the extremity. Disk-flowers 6 to 12, perfect; their corolla narrowly tubular-funnel-form, the summit tinged with purple, at first probably yellow, 5-lobed. Stamens and ~~style as of the~~

S. A. Loughridge.

Style as in the genus, the tips of the branches of the latter slender-subulate. Achenia alike in the disk and ray, a line and a half in length, flat, linear-oblong and narrowed towards the base, moderately contracted at the apex, minutely hairy or with the faces glabrate with age and minutely glandular-atomiferous, each margin conspicuously one-nerved, but the faces not at all nerved nor striate. Pappus 3 lines long, fulvous, not very copious, but nearly as in V. scabra, the bristles ~~occupying~~ ^{most} of the outermost shorter, and some of these not half the length of the inner.

This species manifestly connects the original Tetramolopium

with Eurybiopsis. A depressed
and glabrate variety; from the
District of Waimea, Hawaii,
makes the nearest approach to
Tetrandrium tenerrimum, Nees;
but that species is well distinguish-
ed by its smoothness, its more
exserted ligules, uniserial pappus,
and glabrous, mostly four-ribbed
achenia; it is smaller in all its
parts. Our naturalists did
not meet with it. The subjoined
character is from a specimen collec-
ted by Macrae*.

* Vittadinia (Tetrandrium) tenerrima,
V. suffruticulosa, glabra, caespitosa-multi-
caulis; foliis in caulibus (brevisimis seu
decumbentibus) confertis lineari-spathulatis
uninerviis avenis parce hispidulo-ciliatis
basi longe attenuatis; pedunculis solitariis
gracilibus bracteis pluribus setaceis in struc-
tis; ligulis uniseriatis ^{pluriflorum} Discum super-
antibus tubo subaequilongis; acheniis
obovato-oblongis quadri 4-5-costatis;
pappo uniseriali aequali. — Oahu,
Chamisso, Macrae.

4. Vittadinia (Tetramolpium) Chamissonis.

V. fruticosa, ramosissima, glabella;
ramulis ~~fastigiatis~~ corymbosis
puberulis (foliosissimis; usque ad apicem)
foliis lineari-lanceolatis seu lineari-
bus basi sensim attenuatis et saepius
hirsuto-ciliatis integerrimis sub-
dentatis rariusve laciniato-inci-
sis creberrime papuloso-punctu-
latis submembranaceis venulosis;
pedunculis brevibus filiformibus
corymboso-oligocephalis; capitulis
parvis; involucri squamis lineari-
lanceolatis acutis vel acuminatis;
ligulis 15-20 tubo ^{subterioribus} ~~subaequantibus~~
flores disci 5-10 ~~vix~~ superan-
tibus ~~acheniis~~ stylis plerumque
longioribus; acheniis obovato-oblon-
gis parce hirtellis vel glabratis
quadricostatis, costis marginali-
bus ~~inera~~ calloso-incrassatis,

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facialibus angustioribus nunc
fere obsoletis ~~nunc~~ ^{raro} geminatis;
pappo uniseriali.

Erigeron lepidotus, Less. in Lin-
nea, b. p. 502; Sl. Prodr. 5, p. 284.

E. pauciflorus, Hook. & Arn. Bot.
Beech. Voy. p. 87; Sl. l.c.

Var. ³ arbuscula: foliis ~~in ramulis~~
secus ramulos ultimos confer-
tissimis rigidioribus angusti-
oribus nunc fere filiformibus;
pedunculis abbreviatis; capitulis
paucioribus majoribus.

Hab. Sandwich Islands: Oahu,
in the Kaala Mountains, H.; collected
by Chamisso, Macrae, and others. - Var.
β. On the north bank of the great
crater of East Maui.

A very bushy shrub, its height not mentioned, but apparently as much as two or three feet; the ~~ultimate~~ ^{ultimate} branches slender, but even the ultimate ones more or less woody, crowded with leaves up to the short and slender peduncles. Leaves commonly about an inch long, and one or two lines wide, rather membranaceous in texture, glabrous, except the sparse ciliate hairs which fringe their lower, attenuated portion, at least when young, but minutely papillose-dotted under a lens which gives them a somewhat scabrous appearance, yet not such as to render Lessing's term "lepidote" at all appropriate. Peduncles an inch or less in length, slender, naked, ~~commonly~~ somewhat umbellate or crowded at the summit of the branches, and bearing several (from 2 to 7) heads on short pedicels in a small corymb. Heads only

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two lines in length. ~~Scales of the~~
Involucre little shorter than the
disk; the narrow scales all acute
or pointed, minutely pubescent
on the back, or the inner ones
glabrous, the margins scarious, or
the innermost almost wholly sca-
rious, the margins more or less den-
tulate-ciliate. Pistillate flowers
in more than one series. Ligules
apparently white, linear, from half
a line to nearly a line in length,
truncate and 2-3-toothed at the apex,
shorter than its ^{rather} ~~short~~ tube or some-
times almost equalling it. Disk-
corolla yellow turning purplish;
the limb 5-lobed; branches of the
style linear-subulate, the upper
~~part~~ half minutely hispid. Achenia
a line long, flat, each margin bor-
dered by a thick and salient smooth
rib, and each face with a similar
but narrower, or sometimes inconspicu-

ous rib, or occasionally a pair of ribs. Pappus of Eigerni, barotus, uniserial, but rather copious, fulvous.

The var. arbuscula would be taken for a distinct species and may prove to be so. It has stouter and rigid branchlets, covered with narrower and more rigid leaves, which are somewhat recurved, ~~most~~ ^{not ~~over~~ above half a line wide} an inch or more in length, ^{in the} dried state most of them appear almost filiform, but they are evidently plane when fresh. The heads are less numerous but decidedly larger, being three lines in ^{diameter} ~~length~~; the flowers more numerous, but similar. Ligules not larger than in N. Chamissonis, sometimes not exceeding their styles. Involucres glabrous or nearly so.

It is not surprising that Lessing should have failed to dis-

recognize the close relationship of his *Erigeron leptostus* to his *Aster tenerrimus* (the *Tetrandrium tenerrimum* of Nees), evident as this now appears in the ~~the~~ with our present materials. ~~Any doubt there is an~~ Any doubt that might remain is resolved by a well-marked species, collected by Remy only, which with the inflorescence and exserted ligules of *V. tenerrima* has the ^{general} habit of *V. Chamissonis*, var. *arbuscula*, but still narrower and more rigid, lariciform leaves, *

* *Vitladina* (*Tetrandrium*) *Remyi*, sp. nov.: fruticosa, corymboso-ramosissima, glabra; foliis secus ramulos confertissimis acerosis ^{leviter} ~~deorsum~~ attenuatis supra canaliculatis; pedunculis terminalibus ^{solitariis} ~~se~~ elongatis puberulis bracteis parvis setaceis instructis moncephalis; involucri hemisphaerici squamis

~~linearibus subulatis magisve viridibus;~~ ligulis biseriatis discum pluriflorum superantibus tubo breviusculo subduplo longioribus; acheniis appresse hirsutulis obvato-oblongis quadricostatis; pappo albo uniseriali. — Maui, Sandwich Islands, coll. M. J. Remy, no. 239; herb. Mus. Par. — Shrub at least a foot or two in height; the rigid branches squarrose with the crowded scars of the fallen leaves. Leaves very much crowded on the ultimate branchlets, 6 to 12 lines long, almost as slender as those of a Larch, smooth, or the youngest obscurely scabrous, obscurely re-nerved

on the back, deeply channelled on the upper side as if involute. Peduncles ^{one or two inches} long, single perminating the branches, rather stout and rigid, beset with several bracts or diminutive leaves of only a line or two in length, bearing a single head as large as that of *V. tenerrima*. Scales of the involucre more numerous and more rigid than in the related species. Receptacle after the achenia have fallen 2 lines in diameter, flat. Pistillate flowers numerous, occupying more than one series. Ligules apparently white, narrowly linear, 2 lines long, their tube scarcely exceeding a line in length. Achenia and pappus as in the allied species. This species alone has ligules ^{decidedly} larger than their tube; but they are inconspicuous in the specimens, being narrow and spirally revolute.

5. Vitadina (Tetramolopium) consanguinea ^{sp. nov.}

V. fruticosa, corymboso-ramosissima,
glabella; ramulis usque ad apicem
foliosissimis; foliis lineari-lanceo-
latis seu lineari-spathulatis basi
attenuatis subciliatisque integer-
rimis raro 1-2-dentatis; pedunculis
brevibus corymbosis mono-oligoceph-
alis; capitulis parvis; involucri plu-
riseriali squamis lineari-oblongis
obtusissimis scarioso-marginatis,
margine creberrime denticulato-
ciliato; ligulis plurimis tubo
subaequilongis flores disci 2-5
adequantibus; acheniis glabris
quadricostatis ^{et pappo} N. Chamissonis,

Hab. Sandwich Islands; in
the District of Waimea, Hawaii,
and on the mountains of Kauai.

This species very much resembles N. Chamissonis, and may have been confounded with it. The principal character is in the involucre, which in N. consanguinea is more imbricated, and consists of broader and very obtuse scales, bordered with a more definite scarious margin, which is fringed with thickly-set and fine ciliate denticulations. The heads are not larger than those of the former species, but apparently have more numerous ^{ray} flowers, — ~~Ligules~~ usually 25 to 30. Ligules white, linear, longer than the pappus, somewhat exceeding their styles. Pappus white in one specimen, fulvous in the other, uniserial and simple. Leaves nearly glabrous or soon glabrate. Peduncles short, but slender, minutely pubescent, corymboid, bearing single or 2 to 3 heads. — Stoker and Arrott's Erigeron pauciflorus is said to have

the involucral scales oblong, but acute. Lessing's *E. lepidotus* is said to have them linear and acuminate; and I have identified original specimens of both with those ~~here~~ described above as *N. Chamissonis*.

b. *Vittadinia* (*Tetramolopium*) *arenaria*, Sp. nov.

V. *suffruticosa*, laxa ramosa, hirtell=
~~ramis usque ad apicem foliosis;~~
ca¹ foliis lanceolatis seu oblongo-
lanceolatis basi attenuatis hirtociliatis ^{integerrimis} ~~apice~~ mucronatis; capitulis breviter pedunculatis corymbosis; involucri squamis linearibus acutis submembranaceis; ligulis plurimis tubo brevioribus flores disci 5-9 subaequantibus; acheniis oblongis quadricostatis ^{seu glabratis} ~~hirsutulis~~; pappo uniseriali, setis inaequalibus.

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Stat. Sandwich Islands: Maui,
on sand hills; and District of
Haima, Hawaii.

Stem apparently a foot or two
in height, woody, but the shoots
of the season herbaceous, modera-
tely branched; the branches leafy
to the top, minute-pubescent. Leaves
an inch or an inch and a half in
length, 2 or 3 lines wide, hardly acute
but with a mucronate point, taper-
ing to the base, plane, nearly mem-
branaceous in texture, minute with
short hairs, especially along the mar-
gins and ~~narrow~~ slender mid-
rib, which is ~~pretty~~ conspicuous on
the lower face, the veins almost ab-
solute. Heads, ^{rather few, in a} ~~forming a~~ small
terminal corymb, on slender and
simple or sparingly branched pubes-
cent peduncles, which are hardly
erected from among the leaves, two-

lucres about 3 lines in diameter,
nearly glabrous; the scales nar-
rowly lanceolate-linear, acute or
pointed, thin, almost membra-
naceous, their narrow scarious
margins ciliate-denticulate.

Pistillate flowers 30 or more, occu-
pying several series. Ligules appa-
rently white, oblong or linear,
about a line long, sometimes nearly
as long as the tube, hardly if at
all exceeding the few disk-flowers.
Branches of the style in the latter, as in
the genus, slender-subulate and minu-
tely hispid. Achenia as in the
foregoing species, but rather narrower,
either pubescent or ^{at length almost} ~~nearly~~ glabrous,
a line in length. Pappus simple
and rather scanty, white, somewhat
fragile.

Sp. Nov.

7. Nittadinia (Tetramolopium) conyzoides,

V. puticosa, ramosissima, cinereo-
pubescens; ramulis usque ad apicem
foliosis; foliis angusto-lanceola-
tis basi longe attenuatis intege-
rimis membranaceis; capitulis mini-
mis compluribus in congestum co-
rymbosis; involucris squamis line-
aribus subacutis; ligulis plurimis
brevissimis pappum uniserialem
adequantibus stylis suis brevioribus;
flore hermaphrodito pappus unico;
acheniis parce hisutulis 2-4-cos-
tatis.

Hab. Sand-hills of Maui,
Sandwich Islands.

(more or less)
A shrubby plant, at least a
foot or two in height, copiously
branched, the branches of the season
nearly herbaceous, very leafy. Leaves

one or two inches long, about 2 lines wide, acute, with a long tapering base, somewhat hoary with a fine and rather soft pubescence, obscurely three-nerved or triplinerved. Peduncles slender but scarcely exerted from among the leaves, terminal and from the upper axils, branching, and bearing numerous heads in crowded corymbs. Heads ^{only} about a line and a half in length. Scales of the involucre rather few, linear or lanceolate, the scarious margins crose-denticulate. Pistillate flowers 20 to 30. Ligules oblong, truncate, 2-3-toothed, ^{capitate} not half the length of their tube, shorter than their styles, scarcely revolute-coiled after anthesis as in the rest of the genus. Hermaphrodite disk-flower usually only one, rarely two; its style with slender subulate tips. Achenia as in the related species, but the facial

ribs often inconspicuous or obsolete.
Pappus rather scanty, in a single
series.

By itself this species would
be referred to Erigeron section
Caninus, and would seem to have
nothing to do with ~~the original~~
Vittadinia and little with the
original Tetramolopium. But it is
an evident congener of the preceding
species.

Minuria: Sb.

1. Minuria leptophylla, Sb.

Hab. Hunter's River, New South Wales.

The plant is herbaceous, the root only somewhat lignescent. Rays 16 to 18. Bristles of the pappus in the ray densely denticulate, almost barbellulate. Pappus of the sterile disk-flowers composed of three or four long bristles which are barbellate towards the apex (more so than in Burningham's specimens, which are otherwise similar), and of as many short and ~~laciniate~~ laciniate or cerosed paleae, all more or less concreted at the base.

Calotis, R. Br.

1. Calotis dentex, R. Br.:

Tab. Newington, New South Wales.
A somewhat pubescent variety, with
many of the leaves lacinate or even
pinnatifid.

2. Calotis palmata, Sp. Nov.

C. hispidulo-pubescentis; foliis cuneatis
seu flabelliformibus palmato-3-
5-fidis ^{unc} ~~seu~~ pedatifidis inferne longe
~~attenuatis~~ quasi in petiolum ala-
tum attenuatis basi leviter auricu-
latis, summis linearibus flori-
gisve integerrimis vel apice triden-
tatis; involucri biseriali fere 20-
phylo; acheniis ^{complanatis} levibus; pappo
e paleis 2-4 et aristis 1-2 versus
apicem parce retrorsum aculeatis.

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Stat. Hunter's River, New South
Wales.

Herbaceous, a foot or more in height, sparingly branched, beset with a rather sparse and short hirsute pubescence. Baseline leaves about an inch long; the lower half narrower and petioleform and dilated at the insertion into a small but distinctly auriculate base, and above expanded into a broadly cuneiform or flabelliform limb, which is palmately 3-5 cleft about to the middle, the lobes linear-oblong or lanceolate, ^{acute or mucronate;} the lateral ones occasionally two-cleft, so as to become pedate. The upper ^(and smaller) leaves gradually change into a linear-cuneiform with a trifid apex, or become linear-oblong and entire. Peduncles 2 to 4 inches long, naked.

Heads rather larger than those of *C. dentex*. Scales of the involucre 15 to 20, linear-lanceolate, somewhat biserial. Achenia: fully a line in length, flat, broadly cuneate-obovate, smooth and glabrous, except some scattered and very minute short hairs especially on the thickened margins. Pales of the pappus either two broadly oblong ones on each side, distinct or partly united, or ^{a single} ~~one~~ very broad one on each side, which is often notched at the truncate summit. Aurs one or two, about 3 lines long, or that from the inner angle of the achenium often shorter or obsolete, slender, smooth except towards the summit, where it is moderately or else sparingly retrorsely barbed.

C. dilatata of Bunningham has the aurs of the pappus similarly but more sparingly barbed; its leaves are not lobed as in the present species, and the basal auricles are more conspicuous.

3. Caltis Lappulacea, Benth.

Caltis Lappulacea, Benth. Enum.
Pl. Stuegl. p. 60; Sonder in
Linnaea, 25, p. 470.

Stat. Hunter's River, New South
Wales.

Brachycome, Cass.

1. Brachycome glabra, Benth.

Brachycome glabra, Benth. Enum.
Pl. Stuegl. p. 59.

Steiroglossa rigidula, DC. Prodr. 6.
p. 39.

Stat. New South Wales near Sydney.

2. Brachycome heterophylla, ^{l.c.} Benth.

Hab. Hunter's River and Puer Puer,
New South Wales; with a minutely sub-
glandular form.

3. Brachycome marginata, Benth. ^{l.c.}

Hunter's River, New South Wales.
A variety with narrow linear leaves.

4. Brachycome linearifolia, DC.

Brachycome linearifolia, DC. Prodr.

5, p. 306, ex char. Benth. Enum.
Pl. Stuebeli, p. 60! non Hook. f.

Hab. New South Wales, near Sydney.

Our plant is Benthian's B. line-
arifolia, and the reference to the figure
of Labillardiere shows it to be De Can-

Dolle's also. Sonder has, incorrectly
as I suppose, referred De Baudelle's
B. linearifolia to *B. radicans* of
Studz (which probably *B. graminea*
of Mueller), a less caulescent species
with broader involucral scales; and
Dr. Storker ^{in the Flora of Tasmania,} has described a still
different species under this name.

Lagenophora, Bass.

1. Lagenophora Commersonii, Bass.

Aster nudicaulis, Comin.; Lam. Dict.

1, p. 308, & Ill. Gen. t. 681, f. 4.

Calendula pumila, var. Forst. in
Comm. Goett. 9, p. 40.

C. Magellanica, Willd. Spec. Pl. 3, p. 2344.

C. pumila, Thouars, Fl. Trist. d'Ac.
p. 40, t. 9.

Bellis Magellanica, Lb. in Lam.
Dict. 5, p. 7.

Lagenophora Commersonii, Cass.
in Dict. Sci. Nat. 25, p. 110;
Lb. Prod. 5, p. 307; Hook. f. Fl.
Antarc. 2, p. 307, t. 108; Remy
in Gay, Fl. Chil. 4, p. 30; Wedd.
Chil. And. 1, p. 186, t. 32.

L. Magellanica, Cass. in Bull. Phil.
1818, p. 199.

Stat. Orange Harbour, Fuegia.

The numerous Fuegian speci-
mens of this collection do not differ
from Gay's Chilean ones in the marked
^{that those of Commerson} manner mentioned by Weddell, the
involucral scales being either acute or
obtusely, though hardly so blunt
as those from ^{the} Chilean Andes. The
plant is by no means an annual, but
multiplies by slender stolons. It
is very uniform in appearance. ~~There~~
Neither among our specimens ~~nor in~~

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any herbarium or we find intermediate forms connecting it with L. hirsuta, which we therefore retain as a distinct species.

2. Lagenophora hirsuta, Poepp. ~~et~~

Lagenophora hirsuta, Poepp. in Linnaea,
6, p. 131; Poepp. Endl. Nov. Gen.
& Spec. 1, p. 16, t. 26; Ob. l. c.;
Remy, l. c.; Medd. Chl. Ind.
1, p. 187.

L. Commersonii, var. hirsuta, Hook.
& Arn. Comp. Bot. Mag. 2, p. 51;
Hook. f. Fl. Antarctic. 2, p. 307.

Hab. Grange Harbour, Fuegia.

3. Lagenophora Forsteri, Ob.

Calandula pumila, Forst. Prodr.
Fl. Ins. Austr. p. 57; Willd. l. c.

Microcalia australis, A. Rich.,
Fl. N. Zee. Voy. Astral. p.
231, t. 30.

Lagenophora Forsteri, DC. Prodr.
5, p. 307; Hook. f. Fl. N. Zee.
1, p. 125.

Hab. Bay of Islands, New Zealand.

4. Lagenophora lanata, A. Bunn.

Lagenophora lanata, A. Bunn. in
Ann. Nat. Hist. 2, p. 126; Hook. f.,
Fl. N. Zee. 1, p. 126.

Hab. Bay of Islands ^{and Tappan,} New Zealand.

The lanate-herb and nearly semisucculent leaves, with the long and slender smooth scapes, small head and ~~purple~~ much fewer purple rays, well distinguish this species from the

preceding. It is more like certain
forms of L. Billardieri.

5. Lagenophora Billardieri, Cass.

Bellis stipitata, Labill. Pl. N. Holl.
2, p. 55, t. 205

Lagenophora Billardieri, Cass. in
Dict. Sci. Nat. 25, p. 111; Db.
l. c.; Hook. Fil. Tasman. 1, p. 188.

Trancheus sublyratus, Cass. in
Dict. Sci. Nat. 56, p. 176; Db.
l. c. p. 308.

T. lyratus, Less. Syn. Comp.
p. 193.

Hab. Sydney and Hunter's River,
New South Wales, Waiata-ruru Bay,
New Zealand, according to the ticket.

The specimens all belong to De
Candolle's var. media and var.

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glabrata, and are well represented
Labillardiere figure of Billis stipitata,
except that ours uniformly have
smaller heads. They accord with
Sieber's no. 505, which Dr. Hooker
thinks is distinguishable from L.
Billardieri by its smaller capitulum.
It is pretty certainly Cassini's Exan-
churus (although the disk is fertile
and the ligules not very long), and it
accords with specimens gathered by
Labillardiere at Port Jackson. The
specimens ~~marked~~ ticketed 'Naya-ruru
Bay New Zealand' are not different;
but there may be some mistake about
the habitat in this as in some other
instances. If not the specimens
~~might~~ ^{might} fall under Dr. Hooker's L.
petiolata; though the leaves have
short petioles. The Lagenophora
from Hongkong, and probably that
of Japan, which has been referred to
L. Billardieri is L. Sundaana of Miquel.

which is apparently L. latifolia of
Hooker, ~~which is~~ It is known by its
lanceolate achenia. Those of L. Billar-
dieri are semi-obovate, not 'broadly
obovate'.

Nov. (Tab. . .)

b. Lagenophora Pickeringii, sp. 1

L. foliis hirsutis junioribus primum
villosis lanatis ~~petiolatis~~ oblon-
gis ovalibusque in petiolum
attenuatis repando-dentatis;
scapis gracilibus nudis; involu-
cri squamis linearibus fere glabris;
achenis radii oblongo-lanceola-
tis exsertatis insigniter costatis
glaberrimis, disci sterilibus.

Stat. Mountains of Muthuata,
one of the smaller Feejee Islands.

One of the largest species of the genus; the leaves, which are clustered on the extremity of a thickish creeping rhizoma, being $1\frac{1}{2}$ or 2 inches long and with a petiole of ^{about} half that length, or sometimes ~~nearly~~ as long as the blade, when young densely villous throughout with long hairs, as is the lower part of the scapes, at length only minutely pubescent, membranaceous, obtuse, repand or repand-dentate. Scapes several from the same ~~rhizoma~~ tuft, 6 to 8 inches high, naked, ^{more or less pubescent.} ~~more or less pubescent.~~ Head rather small, in fruit only 3 lines in diameter. Scales of the involucre rather short, linear, obtusish, ^{receptacle strongly convex,} glabrous. Rays in two or more series; ligules apparently white, linear, rather short. Disk-flowers hermaphrodite, but in the

specimens their ovaries wholly infertile and inane. Achenia of the ray a line and three fourths in length, scarcely half a line broad, moderately compressed, slightly narrowed to each end, perhaps a little more so at the summit, which however is not at all rostrate, but terminated by an epigynous disk about the size of the basal callus, the surface coarsely striated by 8 or 10 strong and salient, obtuse, ~~and~~ smooth, longitudinal ribs, in a manner not known, I believe, in any other species. The achenia of *L. Emphysopus*, Hook. f. are equally beakless and somewhat similar in shape, but ~~without~~ not costate.

Plat.

2. Acheniae magnitudinis

... ..

Gutierrezia, Lag.

1. Gutierrezia paniculata, Gray.

Gutierrezia linearifolia, Hook. &
Am. Comp. Bot. Mag. 2, p. 51

* 254, non Lag.
G. paniculata, Gray, Pl. Wright, 2, p. 78;
Galinsogea? resinosa, Hook. & Arn.
Bot. Beech. Voy. p. 32.

Odontocarpa Poeppigii, DC. Prodr.
5, p. 71.

Brachyris paniculata & B. And.
Neesana, DC. Prodr. 5, p. 313;
Remy in Gay, Fl. Chil. 4, p.
35.

Hab. Rio Negro, North Patagonia.
Near Valparaiso and Santiago,
Chili.

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Grindelia, Willd.

1. Grindelia speciosa, Gillies.

Grindelia speciosa, Gillies ex Don;
Hort. & Arn. Comp. Bot. Mag. 2,
(Part. Fl. Grd. 3, t. 290, ex Musc. Ann. Bot. Fr. p. 191.
p. 45.) (G. grandiflora, Gillies in herb.
Brook.)
G. foliosa, Hort. & Arn. l. c., forma
angustifolia.

Hab. Rio Negro, North Patagonia;
on sandhills. A species with very large
heads.

2. Grindelia diffusa, Gillies

Grindelia diffusa, Gillies; in Hort. & Arn.
Comp. Bot. Mag. 2, p. 45 & p. 253;
Sb. Prodr. 7, p. 278.

Hab. Rio Negro, North Patagonia;
on sand hills,

Hooker and Arnott, in their revision, refer this to G. pulchella of Dunal. But the identity did not suggest itself upon a cursory view of the specimens of both in DeCandolle's herbarium. - It is interesting to notice how some of the peculiar types of the Texan-New Mexican region (~~are~~ such this and the foregoing genera, Actinella, Thelaspisma, &c.) are repeated in the similar dry climate of an analogous but widely separated district in temperate South America.

Solidago, Linn.

1. Solidago marginella, Db.

Solidago marginella, Db. Prodr. 5,
p. 332.

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S. odora var. glabra, Hook. & Arn.
Comp. Bot. Mag. 2, p. 45, t. p. 253.

Hab. Rio Negro, North Patagonia,
Andiages only. Very different from S.
odora.

var. Paeppigii)
2. Solidago linearifolia, (Sb. l.c.?)

Hab. Chili, near Santiago.
An imperfect specimen.

3. Solidago chilensis, Meyen.

Solidago chilensis, Meyen, It. 1,
p. 311; Walp. Rel. Meyen, p. 261;
Remy in Gay, Fl. Chil. 4, p.
40.

Hab. Chili, in the vicinity of Val-
paraiso. Depauperate specimens.

Nardophyllum, Hook. & Arn., *ibid.*

Nardophyllum, subgen. *Gochmalia* ? Hook. & Arn. in *Comp. Bot. Mag.*, 1, p. 109, (1835.)

Nardophyllum, DC. *Prodr.*, 7, p. 10; *Nedd. & Ehler. Ind.*, 1, p. 8. (1836)

Dolichogyne, DC. *Prodr.*, 7, p. 529;

Kerney in Gay, *Fl. Chil.*, 4, p. 182, 1845;

Ann. Sci. Nat., ser. 3, 12, p. 184, (1845); *Nedd. & Ehler.*

Ind., 1, p. 180, excl. sect. *Tola*.

Chilodrichum, sect. *Arachnia*, Hook. f.

Fl. Mart., 1, p. 305.

Arachnia, Kerney in Gay, *Fl. Chil.*

4, p. 8.

Microchato, Schultze Bip. in *Reposit.*

Flora, 1855, p. 111, ex *M. Muell.*

Ann. Bot., 5, p. 315, non *Benth.*

1. *Nardophyllum revolutum*, DC.

Gochmalia (*Nardophyllum*, Hook. &

Arn., l.c.) *revoluta*, Don in

Comp. Bot. Mag., 1, p. 109.

Nardophyllum revolutum, DC.

Prodr., 7, p. 10; Kerney, l.c.

Dolichogyne stachelinoides &

D. graphalioides, DC. *Prodr.*

7, p. 235

D. Gaudolei, Kerney, in Gay,

Fl. Chil., 4, p. 103, t. 45; &

Ann. Sci. Nat., ser. 3, 12, p. 185.

Stat. Ardes of Chili, on the first Cordillera above Santiago.

Contrary to Meddell's opinion, it seems clear that Kerney's second *Arachnia* (*Arachnia*, *Nat. l.c.*) was correct when he approximated *Dolichogyne*, DC. to Dr. Hooker's section of *Chilodrichum*.

His genus, *Arachnia*: the error is that he did not combine such evident congeners. *Dolichogyne*,

however, is antedated by *Nardophyllum*; and it is again remarkable

that Dr. Gaudolei, who had established the latter genus upon Hooker

and Arnott's data, did not suspect this subsequent *Dolichogyne*. This,

probably, was because the type ascribed to *Nardophyllum* — *Arachnia* *base bisulcata*; or the strength of

an ambiguous expression at the close of Hooker and Arnott's remarks, and also a popping plurimous;

which phrase the latter authors employ in the generic character, while under the species they more

correctly write "*pappo subplumoso*." The anthers, like the corolla, &c. are strictly Asterineous, and

the side of the pappus are ~~moderately~~ moderately barbellate, rather than plumose, ~~toward~~ along their

upper part. As in many Asterineae, some of the stronger bristles

are more or less thickened or ~~dilated~~ clavellate-dilated towards the summit. Meddell extends the

genus so as to include (in his section *Tola*) three species with heterogamous flowers, the pistillate ones incipiently ligulate. The

most ~~may be no~~ very serious objection to this view is that the whole

genus must then merge in *Lepidophyllum*, *bas.*, which differs only in having the ligules

a little more developed, yet often bilabiate, and the pappus of stouter bristles. The leaves of

Lepidophyllum cypripifolium, ~~indeed~~ indeed, are opposite; but they are both opposite and alternate in

the nearly allied South African genus *Pteronia*; and the difference between *L. cypripifolium*

and *L. Meyeri* (*Arachnia quadrangulata*, *Thunb.*) *Dolichogyne* *lepidophylla*, in respect to the shape of the side of the pappus

phylla, *Meddell*, is *parallel* in *Pteronia* in *Aplepappus*, &c. and cannot justify this combination. I should there-

fore propose to keep up the two genera, *Lepidophyllum* and *Nardophyllum*, (and refer ~~to~~ to the former

Meddell's *Dolichogyne lepidophylla*, which he has figured, and probably his *D. rigida* and *D. rupestris*, with

linear leaves. To *Nardophyllum* belongs *N. Kingii* (*Chilodrichum Kingii*, Hook. f.), *Arachnia Hookeri*, Kerney, which is a strict congener of *N. revolutum*, and the

following, of which I have no specimens to examine; viz. *N. humile*, *Chilodrichum humile*, Hook. f., *Arachnia Hookeri*, Kerney), *N. Darwinii* (*Chilodrichum Darwinii*, Hook. f.), and *N. chilodrichoides* (*Dolichogyne chilodrichoides*, Kerney), species apparently very

close related and perhaps not all sufficiently distinct. Meddell's *Dolichogyne armata*, with the branches of the style subspatulate

and obtuse, appears doubtful. The nearest relatives of both genera, if we may thus distinguish them,

occur in the corresponding cool and dry portion of the northern part of the American continent, where they constitute a distinct feature in the vegetation, i.e. on

some mostly social frutescent plants, or naked plains or plateaux, — At all all's *Chrysospermum* (section of *Linocypis*, *Don*, & Gray, strictly representing *Nardophyllum*, and his *Encarnia* being being ~~so~~ considerably anal-

ogous to *Lepidophyllum*. Taken in connexion with geographical distribution, slight

characters, drawn from the pappus (though weakened in *Linocypis*, *Chrysospermum*, *Brigolovii*) and in the style may serve to keep

separate our North American species, but in a general system it will be hard to find adequate generic distinctions.

Aplopappus, (Bass.)

Aplopappus (excl. sect. Leucopis & Pyro-
chata) & Pyrroneura, Stb. Prodr.
5, p. 345, 350.

1. Aplopappus pulchellus, Stb.

Aplopappus pulchellus, Stb. Prodr. 5,
p. 347; Remy in Gay Fl. Chil.
4, p. 51

~~Leucopis~~

Grindelia pulchella, Bert. in Merc.
Chil. 1829, & coll.

Diplopappus Dorianus, Hook. & Arn.
in Comp. Bot. Mag. 2, p. 47.

D. glutinosus, Poepp.; Less. in Linnaea, 6, p. 43?

Var. β . Canescens: foliis canescenti-lanug-
inosiis. demum glabratis

Diplopappus canescens, Hook. & Arn. in
Comp. Bot. Mag., l.c.

Aplopappus uncinatus, Philippi in Linnaea, 28, p. 728. 110

Hab. Chili, near Valparaiso;
both the smooth and the canescently
downy forms

2. Aplopappus glutinosus, Cass. ? &c.

Hab. Chili, on the lower Andes
near Santiago: a single, imperfect
specimen.

This is, apparently, both DeCandolle's A. glutinosus (Diplopappus glutinosus Paeppig and Lessing, and certainly that of Hooker and Arnott), and also Bertero's Grindelia glutinosa, the type of A. Berterii, DC. It must include A. serotinus, DC. (Diplopappus serotinus of Nees), also A. Diplopappus and A. velutinus ^{with apparently} of Remy, and through A. griseoides, DC., at least of Remy, it probably passes into the following.

3. Aplopappus macrocephalus, Db.

Hab. Chili; between Valparaiso
and Santiago.

The specimens belong to a small-leaved form of A. macrocephalus, Db., - at least to Bertero's no. 315 - and probably to Diplopappus macrocephalus of Paeppig and Lessing, but not of Woker and Arnott. They accord with the D. inuloides of the latter; also with the character of A. curvifolius, of Nuttall. It is a dwarf species, ^{commonly} differing from A. glutinosus in the squarrose involucre, and the more numerous, aristately spinulose teeth to the leaves. A. griseoides appears to be intermediate.

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4. Aplopappus densifolius, Kemy,

Aplopappus densifolius, Kemy in Gay,
Fl. chil. 4, p. 53

A. glabratus, Philippi, in Linnaea, 28,
p. 726?

Diplopappus bellidifolius, Hook. & Arn.
Bompe. Bot. Mag. 2, p. 46.

Ital. Andes above Santiago, Chili.
Very imperfect specimens; perhaps very
reduced A. glutinosus.

Aplopappus Poeppigianus, var. radiatus.

A. humilis, fruticosus; foliis secus
ramos brevibus confertissimis an-
guste lanceolatis rigidis utrin-
que attenuatis cuspidatis inte-
gerrimis ~~und~~ undique seri-

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cis; pedunculis elongatis
nudis parce setaceo-bractea-
tis monocephalis; involucri
~~squamis~~ hemisphaerici squamis
lineari-subulatis glanduloso-
puberulis, apicibus squarrose-
patentibus; ligulis discum
vix superantibus; acheniis seri-
cis.

Bot. Mag. 2, p. 47 (forma eradiata)
Diplopappus Poeppigianus, Hook. & Arn. Comp.
Diplopappus sericeus, Philippi in Linnaea, 28, p. 724.

Hab. Chili, on the Andes
above Santiago.

The Diplopappus Poeppigianus of Hooker and Arnott,
~~in Comp. to Bot. Mag. loc. cit.~~
is not so dwarf as the present
specimens, the involucre is not
squarrose, and the rays are appa-
rently wanting. Otherwise they
are similar, and evidently both
belong to the same species;
which is well marked by its

rigid, entire, lanceolate, silvery-sericeous and Protea-like leaves, crowded on the short and tufted woody branches. Peduncles solitary, ^{slender}, 3 to 5 inches long, naked, except a few setaceous bracts. Head rather larger than in A. pulchellus, to which the species is related. Scales of the involucre numerous, narrowly linear-subulate, puberulent and glandular-viscid, with slender spreading tips. Rays 20 or 30, only 2 or 3 lines long, yellow. Pappus yellowish-brown. Philippi seems to have found it with rays and with the involucre not squarrose.

b. Aplopappus foliosus, DC.

Aplopappus foliosus, DC. Prodr.,
5, p. 346; Kuntz in Fl. chil.,
4, p. 42.

A. Kungifoanus, Kuntz, l.c. p. 43.

A. polyphyllus, Philippi, in Linnaea,
Diplopappus foliosus, Hook. &
 Arn. Comp. to Bot. Mag. 2,
 p. 45.

Hab. Valparaiso, Chili.

7. Aplopappus ilicifolius, Kunze.

Aplopappus ilicifolius, Kunze in
 Gay, Fl. Chil. 4, p. 55.

Diplopappus ilicifolius, Hook.
 & Arn. Comp. Bot. Mag. 2, p.
 46 ('sphaer. foliosus') & p.
 253.

D. mucronatus, Hook. & Arn. l.c.
 et

Baccharis mucronata, Hook. &
 Arn. Bot. Beech. Voy. p. 30.
 (B. Hookeriana, DC. Prodr.
 5, p. 414.)

Hab. Chili, near Valparaiso.

The imperfect specimen belongs to Diplopappus mucronatus, Hook. & Arn., but it appears to be only a form of their D. ilicifolius. This answers to Remy's Aplopappus ilicifolius, the radiate state (of which A. stelliger, Remy, ^{(Pyrrocoma (denticulata Philippi?)} is probably a narrower-leaved variety), and apparently to his Pyrrocoma ilicifolia and P. saxatilis, the rayless state.

8. Aplopappus Macraeanus.

Pyrrocoma (Chromochata) ^{angustifolia} ~~rayless~~
tifolia, Web. Prodr. 5. p. 351;
Remy in Fl. Chil. l. c. p. 63.
P. Macraeana, Remy, l. c. p. 64?

Tab. Andes above Santiago, Chili.
Also collected by Macrae. (Tab. Hook.)

Distinguished from the foregoing by the narrower, apparently always

rayless heads, with more coriaceous and nearly marginless scales of the involucre, and by the glabrous achenia. A. parvifolia (Pyrocoma angustifolia parvifolia, Deb. l.c.), although nearly related, is well distinguished by its smaller leaves and heads, the latter with narrower and much thinner, acutish involucral scales. As the name angustifolia would have little appropriateness ^{in Apocynaceae}, the present species may take the name of ^{one of} its discoverers. ~~For DeCandolle's A.? (Pyrocheta) Harkn. is Crotonogon filaginifolia, doubtless from California.~~

The genus Pyrocoma cannot be sustained upon the rayless head, as DeCandolle and Remy have endeavored to do; for, besides the fact that intimately related and even identical species

of Aplopappus are both radiate
and rayless, ~~I find~~ the original
Pyrocoma has rays, as I
have long ago shown. The shape
and the smoothness of the achenia
also fail as characters, and
the broader involucral scales
furnish no definite distinction.
The puppus of A. ~~Stenkeanus~~ ^{Macraeanus} is
sometimes only fulvous, sometimes
deeply rufous.

Aplopappus? (Pyrochata).
Stenkei, D.C., I have ascertained to
be Erithryone filaginifolia;
doubtless it was collected in Cali-
fornia.

Neja, Don, D.C.

1. Neja linearifolia, D.C.

Diplopappus hispidus, ^{Gillies;} Hook. & Arn.
in Comp. Bot. Mag. 2. p. 48.

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Ital. Rio Negro, North Patagonia.

Chrysopsis, Nutt.

1. Chrysopsis (Leucopsis) vestita.

Diplopappus vestitus + D. candidus,
Willies, Donin' Comp. Bot. Mag.
2, p. 48.

D. sericeus, Hook. & Arn. l. c. pro
M. Patagon. B., non Less.

Aplopappus { (Leucopsis) acuminatus,
Bl. Prodr. 5, p. 348.

Ital. Rio Negro, North Patagonia.

This is distinct, as I suppose, from
the Chilean Diplopappus sericeus of
Leming, which seems to be the same as
Synberis ~~argenteus~~ argenteus, Nees's A.
~~argenteus~~ marginatus, var. argenteus.
The latter has purple rays, a ferru-
gineous pappus, ~~and~~ rather obtuse

scales of the involucre, and a close, silky-canescent pubescence. It is probably specifically distinct from A. marginatus. The present plant is very lanuginous, has the scales of the involucre acuminate; the rays not longer than the fulvous pappus, and apparently yellow; and the flat, obovate-oblong achenia are striate, as in Chrysopsis mollis. An exterior portion of the bristles of the very copious pappus are short, ~~but~~ ^{and forming a distinct series,} not squamulate-setose, as in true Chrysopsis, but just as in C. (Leucopsis) canescens. ~~It is~~ with which it may very well be associated if the ligules are really yellow. If not, it is a Noticastrum, but hardly an Aster.

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Spharanthus, Vaill., Linn.

1. Spharanthus microcephalus, Willd.

Hab. Luzon, near Manila.
(Heads 4 to 6 lines in diameter.)

Dichrocephala, L'Her., Db.

1. Dichrocephala latifolia, Db.

Hab. Samoan Islands, Probably
adventive from Eastern Asia. It
has also been picked up at Tahiti.

Baccharis, Linn.

~~The greater part of the species of
this collection, being well known, need
only to be enumerated.~~

1. Baccharis Lundii, Dc.

2. Baccharis cinerea, Dc.

3. Baccharis dracunculifolia, Dc.

4. Baccharis montana, Dc.

5. Baccharis trimera, Dc.

Ital. Brazil, near Rio Janeiro,
or in the adjacent Organ Mountains.

There is a form apparently of
B. montana with glabrate leaves,
which is B. semiserrata, Dc. no. 38,

(not the homonymous no. 149),

changed to B. hemiprionodes by
Briek, a name which will
hardly be ~~suggested~~ required. —
B. cinerea, ^{which is B. laxa of Gardner,} is probably only a variety
of B. trinervis.

6. Baccharis crispa, Sprang.

Hab. Rio Negro, North Patagonia;
on the plains. Not in flower.

7. Baccharis juncea, Desf.

Hab. Rio Negro, North Patagonia.

This well-marked species, described by Hooker and Arnott under the name of B. subulata, Don,

is truly the B. juncea of Desfontaines, and of DeCandolle. The stems in our specimens are rather leafy, and their base so lignescenscent that the root would seem to be perennial.

Gilliesii,

8. Baccharis ~~Juncea~~) sp. nov.

B. herbacea e basi lignescens,
glabra, humilis; caule ramosissi-
mo; ramis corymbosis gracilibus
striato-angulatis foliosis, ultimis
capitulo solitario terminatis;
foliis sessilibus leviter uninerviis
aveniis, ^{caulinis} linearibus basi attenu-
atis integerrimis seu dentes 2-4
patentes gerentibus, ramealibus par-
vis angustissimis; involucrio cam-
panulato, squamis oblongis obtu-
errimis coriaceis dorso herbaceis

marginem tenuiter scariosis apice
lanoso-ciliatis; achenis gla-
berrimis; pappo foemineo invo-
lucrum ter superante.

var. B.)
Baccharis paucidentata, Hook.
& Arn. Jour. Bot. 3. p. 37:
pl. mass.

Itab. Rio Negro, North Pata-
gonia, Also gathered by Tweedie,
and at Buenos Ayres by Gillies.

One specimen of this in the
Hookerian herbarium is ticketed
'*B. nana*, Don', - a name which
I do not ^{propose to} revive, as the stems are
a foot high when well developed;
although depauperate ones do
not surpass three or four inches.
Hooker and Arnott, having only
~~the~~ male specimens, confounded
the species with *B. paucidentata*
Lb. From that species it is well

distinguished, however, by its solitary head (not subspicate or racemose-fasciculate) ^{and} its campanulate involucre, with broader and very obtuse scales. The stems and branches are rigid but slender, scaparius. The larger leaves less than an inch long and less than two lines broad, usually bearing one or two pairs of coarse and salient teeth; the upper and annual leaves 2 to 5 lines long, very narrowly linear or setaceous-filiiform. Heads terminating the branchlets, large for the size of the plant; involucre 2 to 3 lines long, the scales thick and broad. Pappus ~~long~~ tawny or ferruginous, becoming half an inch long in the female head. Achenia slender and glabrous. — *B. coriifolia* has clustered and much smaller heads ^{and} scabrous-ciliate leaves.

9. Baccharis leptophylla, DC. l.c.

Var. ^{B.} varifolia: ramosissima; ramulis
fere herbaceis; foliis raris
aut nullis.

Baccharis varifolia, Stork. &
Arn. in herb. Stork.

B. genistifolia, ^{pro parte} ~~Stork.~~ Stork,
& Arn. Trav. Bot. 3, p. 40.

Hab. Rio Negro, North Patagonia.
~~Also Buenos Ayres, Tweedie.~~

This is doubtless DeCandolle's
B. leptophylla in a ~~leafless~~ leafless
state, as in our specimens (which
have solitary heads), or sparingly leafy
as in Storker's from Tweedie. The heads
are larger than in B. genistifolia but
smaller than in B. aphylla, also very narrow
and few-flowered, the inner scales elongated
and narrow; no chaff on the receptacle.

10. Baccharis Darwinii, Hook. & G.

Stat., Rio Negro, North Patagonia.

The determination is uncertain, and the specimens are not complete; but they accord very well with the character of the above species, except that the plant is glabrous throughout. The scales of the involucre are lanceolate and very acuminate, and broadly scarious.

11. Baccharis ulicina, Hook. & G. Ann. l. c.

Stat., Rio Negro, North Patagonia.

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Am. l.c.
Hort. & l.

12. Baccharis tenella, Hook. &

Hab. Rio Negro, North Patagonia,
Scanty specimens were gathered of
this and the preceding, both well-
marked species.

l.c.
l.c.

13. Baccharis genistifolia, Deb.

Heterothalamus spartioides, Hook.
& Arn. Jour. Bot. 3, p. 43.
Baccharis spartioides, Remy in Gay Fl. Chil. 4, p. 102.

Hab. Rio Negro, North Patagonia.

Broom-like

Forms dense tufts, one or two
feet high, either leafless or with a
few scales, or with some scattered
linear or subulate leaves. Heads small;
some chaffy scales among the flowers
as in certain other species of Bac-
charis.

14. Baccharis Patagonica, ^{Arn.} Hook & Arn.

Baccharis Patagonica, Hook. & Arn.
Journ. Bot. 3, p. 29; Hook. f. Fl.
Antarc. 2, p. 308.

Stat. Orange Harbour, Fuegia.

A depressed evergreen shrub. Well characterized by the authors above cited; except that the heads of the female plant (which alone occurs in the present collection) are terminal, sessile at the summit of the ~~very~~ stout and very leafy branchlets; at maturity they are nearly half an inch in length, hemispherical, closely subtended by the leaves. Achenia glabrous. Pappus tawny, 3 lines long. It is probably a higher developed state of B. Magellanica.

Baccharis concava, ^{Pers.} ~~Desf.~~

Molina concava, Ruiz & Pav.
Syst. Veg. Per. & Chil. p. 206.
Baccharis tridentata, ^{ta} Poepp. & Endl.
Chil., non Vahl.

B. sinuosa, Hook. & Arn. Bot. Beech.
Voy. p. 31, non H.B.K.

B. concava, Pers. Syn. 2, p. 424.
B. concava & B. Poeppigiana,

Desf. Prodr. 5, p. 410, 411; Hook. &
Arn. Jour. Bot. 3, p. 31.

B. Macraei, Hook. & Arn. l.c. p. 32.

B. intermedia, Desf., l.c.? Hook. &
Arn. l.c.? ~~forma minor angustifolia~~

B. Solieri? (forma angustifolia, ~~inter-~~
interm. capit. pedunc. parvis, =
B. intermedia, Desf.?) & B. rhomb-
oidalis, Kuny in Gay, Fl.
Chil. 4, p. 98.

Stat. Chili, in the vicinity of
Valparaiso. (The different forms
described under a variety of names,

of which the oldest is "a very bad one, and only tends to mislead," as Storker and Knott have remarked.)

16. Baccharis Beranilleana, ^{L.G.} Romo,

Hab. Andes of Chile above Santiago. (First single specimen of the female plant; apparently belonging to the above species. of which the male only was known.)

17. Baccharis rosmariniifolia, ^{Stork. & Kn.}

Hab. Chile, near Valparaiso, and also at Santiago; also the var. subsinuata, from the vicinity of Valparaiso.

The variety, a dwarf state, with sinuate or toothed leaves, may be DeCandolle's *B. intermedia*, but it belongs to the present species. This is very distinct from the following, under which Hooker and ^{in the *Journal Botany*} Krantz have, through some confusion, cited their own much earlier name of *B. rosmanifolia* ^(rightly distinguished in Bot. Beechey Exped.) as a synonym. The involucre is well imbricated, and the ^{fulvous soft} pappus of the female flowers becomes fully half an inch long. Stem woody.

18. Baccharis paniculata, DC.

Stat. Chile, in the vicinity of Valparaiso,

Less woody than the foregoing, with a different foliage, and with very ample lax panicles of smaller

heads, a laxer involucre. Pappus of the female flowers pappous or ferruginous, barely three lines long. It is B. Pingraea of the Flora Chilena, at least in good part, and it is B. linearis Hook. & Arn. Bot. Beech. Voy. p. 57 (though the leaves are not toothed), where it is confounded with the following.

19. Baccharis linearis, Pers.

Molina linearis, Ruiz & Pav.
Syst. Veg. Per. & Chil. p. 205,
ex char.; Less. in Linnaea, 6,
p. 139?

Baccharis linearis, Pers. Syn. 2,
p. 425; Bertero, Coll. Chil. in
Spreng. Syst. 3, p. 463; Hook. &
Arn. Bot. Beech. p. 57,
Arn. fide pro parte.

B. angustifolia, Desf. Cat. Hort.
Par. ed. 3, fide DC.

B. Pingraea, DC. Prodr. 5, p. 420.
(Pingraea angustifolia, Cass. ex DC.)

B. Pingra & B. serculata var.
B. (stenophylla), Hook. & Arn.
Ann. Bot. 3. p. 23.

~~B. gracilis, Bl. Prodr. 8. p.~~

B. Stuebeliana, Kemy in
Fl. chil. 4. p. 90.

B. Pinilloriana, Kemy in herb.
Fl. chil.

Hab. Near Valparaiso and
near Santiago, Chile, Rio
Aegro, North Patagonia.

As this common species
best accords with the original
Molina linearis, and was taken
for it by Bertero, Poeppig, and
Lessing, it may advantageously
be adopted now, that the synonymy
has to be extended, as above.
It is an herbaceous or barely
suffrutescent species, with rather
few and small heads in a loose
corymb at the ~~stem~~ ^{apex} naked

extremity of the slender branches.
The upper leaves are often nearly
filiform; the lower commonly
linear-lanceolate, more or less
three-nerved, and denticulate or
or more strongly dentate with
a few salient teeth.

Hook. & Arn.

20. Baccharis glutinosa, Pers.

Stat. Chili, around Valparaiso.
The var. angustifolia, with elongated
~~linear~~ lanceolate-linear leaves,
the upper narrowly linear, the
B. marginalis of De Candolle. To
this belongs B. confertifolia, Colla, or at least
of Kuny, and B. chilquilla of De Candolle.

21. Baccharis Feuillei, DC.

Stat. Peru, in the vicinity of
Callao and Lima; also near Obra-
jillo.

This is the Chilca of ^{Feuillee} 2. to 37, which DeCandolle ^{erites} like-
wise und B. glutinosa. Perhaps
it is only the broadest-leaved, as
B. marginalis is the narrowest-
leaved form of B. glutinosa.

22. Baccharis racemosa, DC.

Stat. Chili, near Valparaiso and
Santiago; ~~with~~ ^{both} the narrow-leaved
~~variety~~ form described by Hooker
and Arnott (Molina racemosa, Ruiz
and Pavon), and the rigid, broader-
leaved form (Molina sessilifolia,
Less., and B. rigida, Hook. & Arn.).

23. Baccharis sagittalis, DC.

Stat. Vina la Mar, Valparaiso, Chili.
With the leaves minute.

24. Baccharis genistelloides, Pers.

Baccharis genistelloides, Pers. Syn. 2,
p. 425; H. B. K. Nov. Gen. & Spec.
4, p. 67; Ob. Prodr. 5, p. 424;
Wedd. Chl. And. 1, p. 177.

B. genistelloides, β. venosa, Hook,
Bot. Misc. 2, p. 224, t. 94.

B. venosa, Ob. l.c. p. 425.

Hab. Baños, Andes of Peru.
(The form figured by Hooker.)

25. Baccharis floribunda, H. B. K.

Hab. Obrajillo, Peru. (Leaves
less acute than in Kunth's figure.)

26. Baccharis lanceolata, H. B. K.

Baccharis lanceolata, H. B. K. Nov. Gen.
& Spec. 4, p. 63; Wedd. l.c. p. 176.

B. salicifolia, Pers. Syn. 2, p. 425?
nuncpe Molina salicifolia, Ruiz
& Pav.?

Stat. Peru, between Obrajillo
and Cullmay. The same collected
by Matthews near Purruchuca.

27. Baccharis prostrata, Pers.

Molina prostrata, Ruiz & Pav.
Syst. p. 204.

Baccharis prostrata, Pers. Syn. 2,
p. 424; DC. Prodr. 5, p. 406.

B. oblusifolia, H. B. K. Nov. Gen.

& Spec. 4, p. 51?
B. microphylla, H. B. K. l.c. p. 55; DC. l.c.?
B. microphylla B. ~~linearis~~ linearis
Wedd. Chl. And. 1, p. 170, t. 29?

Stat. Andes of Peru, between
Obrajillo^{or Baños} and Cullmay (a larger,
erect form), and from Cullmay to
Casa Blanca, a depressed spread-

ing and subprostrate form; doubt-
less, from the character and the
habitat Molina prostrata of
Ruiz and Pavon. Heads larger
than in B. microphylla, and the
pappus of the female ferrugine-
ous or tawny; (~~Nov. 630 and 558~~
~~of Matthews.~~) but it ~~perhaps~~
probably includes that species also.

29. Baccharis caespitosa Pers.

Molina caespitosa, Ruiz. & Pav.
Syst. p. 203

Baccharis caespitosa, Pers. Syn.
2. p. 425.

B. alpina & humifusa, H. B. K.
Nov. Gen. & Spec. 4. p. 48, t. 322.

B. alpina Wedd. Chél. And.
1. p. 168, t. 28.

Stat. High Andes of Peru,
above Baños, at Casa Blanca,
and Alparamarca.

This is doubtless Persoon's B.
caespitosa, ^{or} Molina caespitosa of
Ruiz and Pavon, whose appro-
priate specific name need not
be passed by. ~~It is much~~ Our
specimens are all much condensed
and caespitose, smaller in all its
parts than B. alpina of Kunth,
rarely over two lines in length, and
much crowded or even imbricated on
the branches. They are not to be
separated from the smaller forms
of B. alpina as understood by
Noddell, ~~and also~~ which includes
B. humifusa as a larger variety.

Coryza, Linn.

1. Coryza balsamifera, Linn.

Hab. Baños, Luzon, Philippine
Islands.

2. Coryza appendiculata, Blume.

Hab. Mountains of Muthrata,
one of the Feejee Islands. Perhaps
only a variety of the foregoing.

Blume Milnei, Blume.
3. Coryza sylvatica, Blume?

Hab. Ovolan, Feejee Islands.
(The determination doubtful, not having
seen the Javan species.)

cf. Blumea Milnei, Blume, Blume.
in my herbarium - and a copy

4. Gonyza hirsuta, Linn., ~~Less.~~
Pluchea hirsuta, Less. in Linnaea, 6, p. 150; Lb. Prodr. 5, p. 453.

Hab. At Caldera, Mindanao,
one of the Philippine Islands.

5. Gonyza Indica, Blume.

Hab. Philippine Islands; with
the preceding.

Pluchea, Cass.

1. Pluchea Chingoyzo, Lb.

Gonyza Chingoyzo, H. B. K., Nov. Gen.
& Spec. 4, p. 76, t. 328.

Hab. Yanga, Peru. Common
as far as to Pasto, where, according
to Prof. Jameson, it abounds, forming a

Shrub of considerable size and
covering large tracts of ground.

2. Pluchea Lutea, Sw.

Hab. Rio Janeiro, Brazil;
where it is very common.

Pterocaulon, Ell., Sw.

1. Pterocaulon angustifolium, Sw.

Hab. Vicinity of Rio Janeiro, Brazil;
in marshes.

The specimens are of a ^{(rather} broad-leaved
form, and the species apparently will
include both P. interruptum and P.
spicatum.

Tessaria, Ruiz & Pav.

1. Tessaria integrifolia, ^{Pav.} Ruiz & Pav.

Hab. Callao, Peru.

The original specific name, needlessly superseded by Lee Candolle, is an appropriate one, the hoary leaves being entire or barely repand-toothed. ~~It with~~ The species includes T. mucronata, Lb., as well as T. legitima, Lb.

2. Tessaria absinthioides, Lb.

Hab. Chili, at Valparaiso (where it abounds), and Santiago.

Eclipta, Lin.

1. Eclipta alba, Stassk.

Cotula alba, Lin., Syst. Nat. 2,
p. 564, et Verbesina alba, Lin.

Eclipta alba, Stassk., Pl. Jav. Kar.
p. 528; Miq., Fl. Ind. Bat.
2, p. 65.

E. erecta & E. prostrata, Lin.
Mant. p. 216, etc.

E. procumbens & E. brachypoda,
Nichx., Fl. 2, p. 229.

Hab. Rio Janeiro; Lima
and Bullao, Peru; and Sandal-wood
Bay, Feeje Islands; the var. erecta,
Ovolau, Feeje Islands; and Luzon
near Manilla; the var. prostrata,
Hunter's River, New South Wales; a
slender intermediate form.

Blainvillea, Cass.

1. Blainvillea rhomboides, Cass.

Stat. St. Jago, Cape Verde
Islands.

Both the typical form and
the variety lanceolata. Probably
introduced from Brazil. It is
recorded from the Cape Verde Islands,
where B. (Cronocarpis) Gayana
is said to abound. I have not
the latter for comparison, but our
specimens accord with Brazilian
B. rhomboides.

Siegesbeckia, Linn.

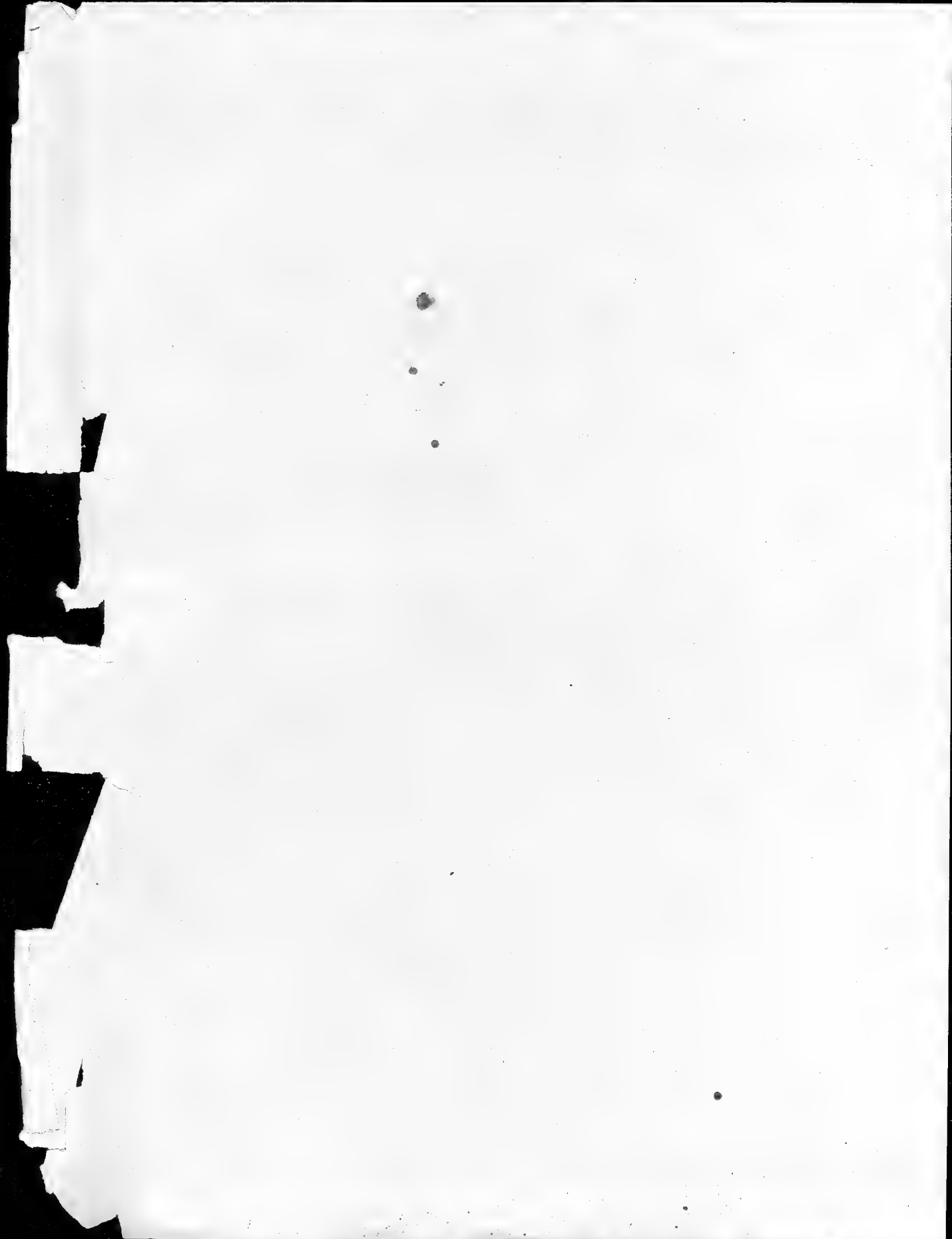
1. Siegesbeckia orientalis, Linn.

Hab. Society, Samoan, and
Tonga Islands: probably adventive.

2. Siegesbeckia microcephala, DC.

Hab. Hunter's River, New South
Wales: a variety with the larger
leaves lacinate-toothed. A form
nearer the type of the species is in
the collection, ticketed as from the
Bay of Islands, New Zealand; but
I suspect it to be Australian.

~~Diego de la Cruz, Lima.~~
~~N. diego de la Cruz, Lima.~~
~~Ital. Society, Darwin, and~~
~~Junga, Brazil. New York with~~
~~newer, almost entire leaves.~~





Euxenia, Cham.

1. Euxenia Mitqui, Db.

Hab. Chile, common at Valparaíso and Santiago.

Polymnia, Linn.

1. Polymnia Siegesbeckia, Db.

Hab. Brazil, near Rio Janeiro.
(A true Polymnia.)

2. Polymnia glabrata, ^{tifolia, Db.} var. angustifolia

Hab. Peru, near Obrajillo;
and at Cullmay, the variety
angustifolia.

The larger plant is a shrub,

from 12 to 18 feet high, according
to Dr. Pickering's notes; the leaves
auriculate-clasping at the base;
the rays short and yellow. The
size of the smaller and narrow-
leaved plant was not recorded.
Hooker's specimens were probably
gathered in Peru, not in Chile.

Battimora, Linn. Steetz.

Battimora & Fougeria, Moench,
Meth. p. 592, & suppl. p. 243.

Scolospermum, Less. & Fougerouxia,
De Prov. 5, p. 509

1. Battimora recta, Linn.

Hab. Rio Janeiro, Brazil. A
native of Tropical America.

Acanthospermum, Schrank.

1. Acanthospermum ^{Schrank.} Brasilium,

Acanthospermum Brasilium, Schrank,
Pl. Rar. Hort. Monac. t. 53.

A. Xanthioides & A. hirsutum, DC.
Prodr. 5, p. 522.

Centroppermum Xanthioides, H.
B. K. Nov. Gen. & Spec. 4, p. 271,
t. 397.

Hab. Rio Janeiro, Brazil.
Common in Tropical America; it
has also found its way to the
Sandwich Islands.

2. Acanthospermum hispidum, DC.

Hab. Around Callao, Peru. The
only station as yet recorded on the
western coast of America. But such
bars are likely to be ^(disseminated) ~~diffused~~ widely.

Ambrosia,ourn.

1. Ambrosia tenuifolia, Sprung.

Ambrosia tenuifolia, Sprung, Syst.
3. p. 851; Ob. Prodr. 5. p. 527.

A. puticosa, var. intermedia, Ob. l.c.
p. 526.

Hab. Rio Negro, North Patagonia,
Also collected at Montevideo by Com-
merson, Capt. King, Isabelle, H. as
well as by Sellow. The stem is
hardly woody, but the root is

perennial. A. puticosa from Tamaulipas is Frank
DeBardolis's A. puticosa from Tamaulipas is Frank
seria tenuifolia, var. tripinnatifida, Gray, Pl. Wright. It
extends from the Gulf of Mexico to California, and Gray has
collected it at the Rancho of San
2. Artemisia Peruviana, Willd.

Hab. Callao and Lima, Peru.
Unless the root is truly perennial,
probably not distinct from A. artemisi-

It is proposed to set up the Boston Reading
in Cambridge for Nov. 18th, 18th, & 19th.
for Tuesday & Thursday Eve. Dec. 18th, & 19th.
The first reading at Mrs. Frothingham's, Monday Eve.
Tuesday Eve. Dec. 18th, at 8 o'clock.
The lecture for the two readings -

affilia (including ~~to which belongs~~ A. hetero-
phylla, Muhl. and A. paniculata,
Michx.), to which I ^{should} refer an
undeveloped specimen in the col-
lection from Rio Janeiro.

Hanthium, Tourne.

1. Hanthium strumarium, var. echinatum

Hanthium strumarium, var. echi-
natum, Gray, Man. Bot. N. H.,
2. ed. 2, p. 213.

H. echinatum, Murr. in Comm.
Goett. b. p. 32, t. 4; Torr. & Gray,
Fl. N. Amer. 2, p. 294.

H. maculatum, Raf. in Sill,
Journ. 1, p. 151.

H. macrocarpum, DC. Fl. Fr.
Suppl. p. 356, & Prodr. 5, p. 523.

H. orientale, Linn. f. Dec. p. 33, t. 17;
Garten, Fruct. t. 164.

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Hab. Rio Negro, North Patagonia, and Hawaii, Sandwich Islands; on the coast.

The specimens are just like those of the coast of the United States. I am convinced that it is only a maritime state of H. strumarium, occurring on the shore in widely separated parts of the world.

Zinnia, Lin.

1. Zinnia pauciflora, Lin.

Hab. Peru, in the vicinity of Otrujillo. (The original species of the genus.)

Jaegeria, H. B. K.

1. Jaegeria repens, DC.

Hab. Brazil, in the Organ Mountains

near Rio Janeiro.

Heliopsis, Pers.

1. Heliopsis canescens, H.B.K.

Hab. Peru, at Obrajillo and
Baños. (Probably only a variety
of H. hypochaeroides, which,
from Dr. Pickering's notes, was
noticed at Lima, but is not in
the collection.)

Wedelia, Jacq.

1. Wedelia Acapulcensis, H.B.K.

Wedelia Acapulcensis, H.B.K.,

Nov. Gen. & Spec. 4, p. 215;

Stectr in Bot. Voy. Herald,
p. 156.

Hab. Callao, Peru.

2. Wedelia scaberrima, Benth?

Wedelia scaberrima, Benth
^{Am. Bot. Hist. 2, p. 119, &}
in York. Jour. Bot. 2, p. 43.

Stat. Obrajillo, Peru.

The single ^{flowering} head will hardly
bear dissection: but the specimen
accords very well with Schom-
burgk's Guiana plant, although
it is likely to belong to some
other species.

Mulfia, Necker.

1. Mulfia longifolia, Gardner.

Mulfia longifolia, Gardner
in Hook. Lond. Jour. Bot. 7,
p. 293.

Hab. Brazil, in the vicinity
of Rio Janeiro.

Our specimens accord with
Gardner's; also with a Brazilian
specimen in the Hookerian herbarium
collected by Boiss., and
another from the Vienna herbarium.
I should refer them to M.
oblongifolia, DC., except that the
leaves are so much more than
two inches long and seven lines

broad, and the pungent tips of
the chaff only slightly recurved.
Fruiting heads spherical, two-thirds
of an inch in diameter. Achenia
fleshy - drupaceous. Ligules ap-
parently white or ochroleucous.

Sclerocarpus, Jacq.

1. Sclerocarpus Africanus, Jacq.

Hab. St. Jago, Cape Verde
Islands.

Encelia, Adams.

1. Encelia canescens, Cav.

Hab. Callao and Lima, Peru.
Also Yanga; two states, one depar-
tate and the same as E. parvifolia.

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H.B.K.; the other ^(densely) lanate,
and answering to E. tomentosa
of Walpers.

An inspection of the specimens,
^{preserved} in various herbaria, from those
of Donkey Down to those of
the present collection, leads to
the conclusion that all four
species in DeCandolle's Prodro-
mus are forms of one, which
varies considerably in the form and
size of the leaves, and ~~wid~~
strikingly in the amount and
character of the pubescence or
hoariness. For this the specific
name canescens may be retain-
ed as being the oldest under this
genus, but that of californica
precedes it under Pallasia, and
Linensis is the oldest of all.

Nuttall's E. californica appears
distinct at first view by its
^{very} villous involucre and elongated

ligules; but the Chilean
E. oblongifolia seems to be
truly intermediate. E. hispida
of Andersson, from the Galapagos,
looks peculiar and has much
smaller heads. E. nivalis, Benth.,
of the southern part of California
is truly distinct.

Flourensia, Db.

1. Flourensia thurifera, Db.

Hab. Chile: common in the
vicinity of Valparaiso; ^{also at Santiago.} (Apparently
a true congener of the discoid,
North Mexican species.)

Lithonia, Desf.

Lithonia et Starpalium sect.
Starpalizia, Db. Prodr. 5, p. 584.

1. Lithonia sericea.

Starpalium? (Starpalizia) sericeum,
Db. Prodr. 5, p. 584.

Hab. Peru; near Yanga and
Obrajillo.

A clear congener of Lithonia
excelsa, Db., and still closer related
to L. angustifolia, Hook. & Arn. I
do not know ^{De Candolle's} Starpalium Mexillense
and St. aureum; but St. rigidum
is a true Helianthus, with cadu-
cous pappus.

2. Tithonia pusilla, sp. nov.

T. annua, hispidula; foliis oppositis subalternisve lanceolatis fere integerrimis breviter petiolatis; capitulis nudis pedunculatis; involucri squamis lanceolatis hirsutis subpaucis; achenis villosis; pappi paleis 4-6 aristisque binis plumoso-ciliatis.

Hab. Obrajillo, Peru.

The few specimens are perhaps a depauperate state of a larger plant. The stems are barely a span high, from a slender annual root, either simple and terminated by a single head or with several moncephalous branches, sparsely hispid. Leaves an inch or less

in length, hispid, on both
sides, not coriaceous, nearly
destitute of obvious ribs or
veins, narrowed at the base into
a short or indistinct petiole.
Head when in fruit scarcely
half an inch long. Rays
few, yellow. Involucral ^{scales} al-
most in a single series, erect,
with slightly spreading ^{villous-hispid} tips, shorter
than the disk at maturity.
Scales of the receptacle oblong,
thin and membranaceous, striate,
navicular, cuspidate. Achenia
elongated cuneate-oblong, 2 lines
in length, villous with long erect
hairs. Pappus apparently persist-
ent, consisting of two or three
palea on each side and two
rather stout subulate awns;
the former oval or oblong, very
obtuse, of a firm texture, some-
times coalescent, nearly a line

long, laciniately fimbriate-ciliate at the obtuse or truncate summit; the auris nearly twice the length of the palea, with fimbriolate-ciliate margins. — The plant has somewhat the aspect of a Simisia, but the characters of a Fithonia.

Niquiera, H.B.K.

1. Niquiera Peruviana. Sp. M.

V. caule hirsuto adscendente; foliis alternis ellipticis sen ovato- oblongis acutatis vel mucro- natis acutis serratis trinervatis utrinque cineris supra hispido- ulo- scabris subtus appresso- hirsutulis basi acutis sub- similibus; involucri squamis

oblongo-lanceolatis apice
patentibus extus praesertim
ad margines albo-hirsutis;
receptaculo obtuse conico;
ligulis elongatis; ~~achenis~~
pappo 4-squamellato hirsu-
tato.

Stat. Peru, between Obrajillo
and Arequipa.

Stems apparently ascending
or decumbent, somewhat hirsute,
leafy; ~~Leaves~~ the base not
seen. Leaves all alternate in
the specimens, rather crowded,
2 inches long, an inch wide,
or the uppermost smaller, tripli-
nerved from very near the base,
somewhat veiny, cinereous above
with a close and fine scabrous-
hispid pubescence, and beneath
with more hirsute hairs, the mar-

gins entire towards the base,
otherwise serrate or serrulate.
Heads solitary on short peduncles,
somewhat globose in fruit, 6 or 7
lines in diameter. Involucre
squarrose; the scales imbricated
in two or three series, nearly equal,
shorter than the fructiferous
disk, acute or acutish, hirsute
externally, or at length only
hirsutely ciliate. Rays yellow,
12 to 18 lines long. Achenia
oblong, fully a line and a half
in length, villous-pubescent,
crowned with two subulate awns
and four short lacinate-fimbriate
scales which are approximate
to the base of the awns,
one on each side, and sometimes
partly ~~consist~~ adnate to them,
all apparently persistent or tardily
perhaps tardily deciduous.

Having a squarrose involucre,

This species would fall under Leighia of bassini and de Ban-
dolle, but Gardner has rightly
referred that genus to Niquiera.
Harpalium, Bass., however, ought
not to accompany it, the origi-
nal species being a good Heli-
anthus, nor Harpalizia, DC.,
unless the genus takes in the
perennial and narrow-leaved
species of Fitchia also. Heli-
anthus is marked not by the
absence of intermediate squamellæ
so much as by the caducous
character of the whole pappus.

I suspect that the present
species is identical with a less
cinereous plant, in Dombey's
Peruvian collection, preserved in
the general herbarium of the Paris
Museum, ticketed, It. ^{eliquethus} procumben-
tis affinis! Pers., but I have not
compared the specimens.

Coreopsis, Linn.; Torr. & Gray.

* Peruviana (Agaristoidea).

1. Coreopsis (~~Agarista~~) Pickeringii, sp. ^{nov.} ₁

C. suffruticosa, fere glaberrima;
ramis apice longis nudis monocephalis; foliis oppositis petiolatis tritermatisectis, segmentis linearisubulatis rhachi tenui vix latioribus; involucri squamis exterioribus linearibus. interioribus ^{bus} oblongis dimidio brevioribus; ~~ligatis (an semper)~~ ~~muttis~~; paleis receptaculi oblongis obtusissimis, exterioribus dorso villosis; acheniis linearis-oblongis dorso sub palea glabris ~~intus~~ ventre et praesertim marginibus villorissimis biaristatis; aristis villosis-barbellatis corolla paullo achenio dimidio brevioribus.

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Habit, Andes of Peru, between
Obrajillo and Cullmay; also
at Casa Blanca, according to
Dr. Pickering's notes.

Stem woody at the base,
one or two feet high, with ^{slender} spread-
ing branches, which are very
leafy below, their naked sum-
mit forming a peduncle of 3 or
4 inches in length, which is
obscurely pubescent next the
head. Petioles slender, about
half an inch long to the primary
division, the divisions about twice
three-parted, the ^{ultimate segments} ~~lobes~~ linear-sub-
ulate, 2 to 4 lines long, scarcely
half a line wide, ^{very} acute, rather
rigid. Scales of the inner involu-
cre 8, oblong, ^{acutish} thickish with thin
and yellowish margins, glabrous,
nearly half an inch long; those
of the outer very much smaller and

shorter. The ligules have fallen
from the solitary head; their
achenia sterile. Palea of the
receptacle petaloid-scarious,
yellowish, striate, ^{somewhat} connate with
the callus of the disk-achenia.
The latter are 2 or 3 lines long,
flat, perfectly smooth and gla-
brous on the outer face, which
is covered by the palea, but
villous on the inner face,
and very strongly villous on
the margins; the truncate
summit bearing a pair of
erect, rather stout, persistent,
upwardly villous awns, which
are more than half the length
of the disk-corrugas, but only
one half or one third the length
of the achenium.

This and ~~some~~ ^{several} related species
of the Andes of South America,

— some of which are still unpub-
lished,* some to ~~correct~~ unite
De Vaudelle's Californian
genus *Agarista* to *Coreopsis*,
as I have elsewhere remarked.

2. *Coreopsis fasciculata*, Wedd.

Coreopsis fasciculata Wedd., Chl.,
And. 1. p. 71.

Stat. Peru, in the Andes above
Obrajillo.

~~except that the inner involucre~~
Apparently the same as a shrubby species
collected by Matthews at "Purro-
stinea and Obrajillo" ^{no. 57} which
in the Hookerian herbarium I
had named *C. Matthewsii*,
and which, from a comparison
of the characters, appears to be
Weddell's *C. fasciculata*. ^{except that the inner involucre is glabrous.} It has
^{both} the faces of the achenia glabrous,
but the margins ciliate with
long villi.

* Besides the two species in the
text, and *C. capillacea*, Hook., ~~and~~
~~also *C. venusta*, Hook.~~ (which
Seemann collected at Loxa), also
C. venusta, Hook., (of which a plant
collected by Matthews in the
province of Chachapoyas is
thought to be a variety, with
nearly filiform leaves and smal-
ler heads on short peduncles), I
may characterize the following
from specimens in the Hookerian
herbarium. The latter of the
two is, ^{the} ~~much~~ more related to *Ag-*
arista.

Coreopsis foliosa (sp. nov.):
ramis hirsutis usque ad apicem
confertissime foliosis; foliis oppositis
glaberrimis rigidis crassiusculis
tripartitis, segmentis lateralibus
anguste spatulato-oblongis,
terminali tripartito; capitulis
paucis subcompunctis breviter
pedunculatis; involucri externi
squamis 8 lineari-oblongis obtusis-
simis pubescentibus ^{quam} interioribus
ovalibus ~~3~~ ^{1/2} brevioribus; ligulis
(6-8) oblongis; corollis disci luteis
demum brunneis; acheniis oblongis
hirsutis utrinque unicarinatis
marginibus hirsutissimis biaristatis;
aristis subsquamelloformibus tri-
quetris dense ciliato-hirsutis cor-
ollam adaequantibus. — "Tania",
Peru, Matthews, 1376, in herb.
Hook. — Leaves an inch or less
in length, crowded, and also fas-
cicled in the axils; lateral seg-
ments as long as the middle one,
3 or 4 lines in length. Ligules
yellow, 5 lines long.

Coreopsis spectabilis (sp. nov.):
suffruticosa? glabra; foliis oppo-
sitis circumscriptione rotundis bi-
pinnalisectis vel 3-5-sectis, segmen-
tis 5-partitis, lobis linearibus acutis
integerrimis bi-trifidisve laxis;
ramis in pedunculo longissimis ^{unc.} (6-
10-unc.) nudis ^{unc.} ~~monoccephalis~~ ^{unc.} ~~desi-~~
~~gnantibus~~; involucri ambobus 8-
phyllis glaberrimis basi coriatis,
squamis exterioris linearibus par-
vis ^{is} ^{quam} interiores ovato-oblongis ² colora-
to-marginatis dimidio brevioribus;
ligulis 8 magnis; disco luteo-brun-
nescente; acheniis lineari-oblongis extus sub-
palea glabris marginibus et costa ventrali
longissime villosis aristas 2 paleoformis
villosas ciliatas corollam subaequantibus gerentibus.
— Peru, McLean, in Herb. Hook. — Leaves 1 1/2 inches
broad. Disk of the head 6 to 8 lines in diameter. Ligules
about an inch long, yellow.

* * Sandwicensis. (Campylotheca, bass.)

Coreopsis and Bidens are separated by a ^{single} ~~single~~ artificial, and not absolutely constant character. The Coreopsis on which Nuttall proposed to found his genus Dio-
dronta differ from the Platyca-
rpa section of Bidens, ^{with} which they accord in habit, only in their antrossely hispid or naked awns or teeth of the pappus; recently specimens of C. aristosa, Michx., if not of a hybrid between that species and some Bidens have presented themselves ~~to the~~ with retrossely hispid awns. The Sandwich Islands present us with a series of species which equally connect the Psilo-
carpa section of Bidens with Coreopsis. Some of them, having their achenia curved or twisted at maturity, ^{were} ~~have been~~ naturally

enough distinguished as ^a separate genus, Campylotheca; but its adoption, as may be seen from in the characters of the following species and of Bidens Sandwicensis, would merely give us three limitless genera in the place two artificially separated ones.

The first of the subjoined species is in all respects a good Coresp=
sis. The second differs merely in its elongated achium slightly disposed to curve or twist. The others are Campylotheca, with more or less curved or spirally twisted achenia, either narrowly wing-margined or wingless, but manifestly inseparable congeneric with the preceding species. Their union with Coresp=
sis is suggested both by their wanting the technical character of Bidens, and by the fact that the former contains

Species with winged and with
curved achenia. On the other
side we can draw only an ar-
bitrary line of generic distinction
between Bidens Sandwicensis,
of Lessing, and Campylotricha
micrantha; for which yet when
the latter (always straight) achenia
of the former bears awns these
are retrose hispid, although
sparingly so.

Tuck,

3. Coreopsis Mauiensis, Sp. nov.:

C. pubescens, diffusa, parce
hirsuta, mox glabrata; foliis
trisectis, segmentis oblongis
vel subcuneatis inciso-dentatis
nunc 3-5-partitis seu termi-

naali pinnatifidato; pedun-
culis elongatis moncephalis;
involucri exterioris phyllis
linearibus interiores aequan-
tibus; acheniis ^{glabris} anguste
oblongis modice alatis
haud contortis apice bidenta-
tis.

Hab. Maui, Sandwich Is-
lands, on sandy or dry hills
near the coast. Also collected
by Kemy, the form with more
dissected leaves.

A shrubby, diffusely branched
plant, apparently only a
foot or two in height; the
younger stems, petioles, &c.
minutely and sparsely hairy,
at length glabrate or glabrous.
~~Petioles 6~~ Leaves all opposite.
Petioles 6 to 10 lines long, Lowest

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leaves occasionally undivided and
oblong or obovate; but nearly
all the rest trisected; the leaf-
lets oblong, or somewhat cuneiform,
obtuse or acute, thickish, coarsely
toothed or incised, the lateral
^{about half an inch long;} pair sessile, the terminal one
petiolulate and usually an inch
long, sometimes all of them tripid,
or the terminal one more dissected
into oblong-linear lobes. Pedun-
cles solitary and terminal, slender,
3 to 6 inches long, bearing single
heads. Involucre 2 or 3 lines long;
the exterior of ~~about~~ 6 to 8 linear
and obtuse foliaceous scales, some-
times ^{their tips sometimes glandular;} those of the ^{inner} ~~outer~~ ^{lanceolate}
what spreading, ~~the~~ ^{the} inner ~~outer~~
oblong, striate and somewhat col-
ored. ~~disk flowers yellow.~~
Rays 7 or 8, neutral;
the ligules oblong, many-striate,
obscurely toothed at the apex, about
5 lines in length. ^{disk-corymb yellow.} Branches of the
style tipped with an acute cone.

Achenia all alike except that
the outer are rather shorter and
broader than the innermost,
flat, narrowly or rather broadly
oblong, striate on both faces,
surrounded by a thin and rather
broad wing, which is extended
at the summit on each side
into a triangular or subulate
flat tooth, ^{with} the inner edge of which,
in some instances, a very small
smooth awn appears to be con-
fluent.

Slide

carpa, Sp. Nov. (Tab.
4. Careopsis (Campylo^{theca}spora) macro =

C. herbacea? glabra; foliis pinn-
atis 5-sectis, segmentis ova-
tis cuspidato-acuminatis
argutissime et creberrime ser-
ulatis; pedunculis oligoceph-
alis folia subsuperantibus;
achenis pro capitulo magnis
(subpollicaribus) linearibus
striatis alatis vix tortis sub
apice bivistulatis sen bi-
corniculatis

Tab. Oahu, Sandwich
Islands; on the mountains
behind Honolulu.

Base of the stem not seen;
the single specimen is a branch,
a foot long, rather rigid, smooth. Pe-
tioles an inch or more in length, slender,

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Leaflets uniformly 5, ovate or
oblong-ovate, sharply pointed, very
sharply serrate with fine subu-
late teeth, ~~an inch~~ of a rather
firm texture, veiny, an inch
or a little more in length;
the lateral ones nearly sessile,
the three upper sometimes con-
fluent. Peduncles axillary and
terminal, erect. Heads in
flower 3 or 4 lines long, ~~not~~
not including the rays. Exterior
involucre of 6 or 8 loose and foli-
aceous oblong-linear scales, equ-
alling the linear-lanceolate and
somewhat colored inner ones.
Ray-flowers sterile but with
an abortive 2-cleft style and often
with rudimentary filaments:
ligule oblong, 2-toothed at the
apex, yellow, 4 or 5 lines long.
Anthers and style partly exserted.
Ovaries ^{flat} obovate-cuneiform, one-
ribbed on each face, soon wing-

marginated, the margin sparingly ciliate, and extended on each side at or slightly below the broad and more or less emarginate summit into a ^{somewhat} ~~stout~~ divergent stout and short awn or horn. This is either naked or obscurely ciliate upwards ~~with~~ with a few small ~~bristly~~ bristly hairs, like those of the margin, ~~of the achenium~~. Achenia all alike (except the abortive ones of the ray), when full grown 9 or 10 lines long, and a line and a half wide, including the very distinct and rather thin straw-colored wing minutely and sparingly ciliate under a lens; the two erect or spreading awns about half a line long, either apical or often fully half a line below the narrowed apex, sometimes obsolete

or deciduous. The achenia, al-
though ^{fully grown} ~~well~~ formed, show only
a slight disposition to curve or
twist, while in the next species
even immature ones are much
curved.

Male

Achenia

Not found with achenia

5. Coreopsis (Campylotheca) Macrae.

C. herbacea, puberula - hirtella;
ramis elongatis patentibus;
foliis ternatis sectis, segmen-
tis lanceolatis acuminatis cre-
berrime serratis; capitulis laxo
paniculatis paucis magnis;
acheniis linearibus glaberrimis
calloso-marginatis cal-
vis "aut junioribus vix biseto-
sis" spiraliter tortis.

Campylotheca grandiflora, DC. Prodr. 5. p. 593.

Ital. Hawaii, Sandwich Isl-
and, Macrae, Kery.

No specimen of this occurs
in our collection. The above char-
acter (with the bundles in view) is
drawn up from a specimen of
no. 287 of Kery's collection in
the Sandwich Islands, communicated
from the Paris Museum. The

Species does not merit the
name of grandiflora (preoccupied
in ~~tridens~~^{brunneus}) although they are
nearly twice as large the size
of those of the allied ~~A. micrantha~~^{A. micrantha}.
Involucre nearly as in most of
the following. Rays perfectly
sterile, 3 to 5 lines long. Style
with only the thickened branches
projecting beyond the exserted
anthers. Ovaries perfectly gla-
brous, oblong, compressed, desti-
tute of pappus or crown, or
some of the exterior with a
minute point ^{each side of} at the summit.
Immature achenia 4 or 5 lines
long, a line wide, curved and
twisted, with a thick and callous
margin of the same consistence
~~as the~~ and brown color as the
body of the acheneum.

Plate 1

Acheneum.

b. Coneopsis : (Campylothea) cosmoides. Sp. nov.

B. Herbacea, fere glabra; foliis cau-
linis pinnatim 5-sectis summis
ve trisectis, sametalibus saepe
indivisis segmentisque ovato-
oblongis acuminatis argute
serratis membranaceis; peduncu-
lis breviusculis monocephalis;
capitulo ^{magno} ~~parvo~~ ~~involucro~~ ~~exteriori~~;
involucro exteriori 8-phyllo
interius adaequante, phyllis
oblongis seu oblongo-lanceola-
tis; ligulis apice inciso-lo-
batis; genitalibus praesertim
stylo longissimo valde exsertis;
acheniis immaturis linearibus
exalatis nunc flexuoso-curva-
tis marginibus ^{hispidulis} ~~at~~ apice setuloso-
coronulatis aristis 2 brevibus seu
brevisimis fere nudis subter-
minatis.

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Hab. Sandwich Islands; on
the mountains of Karai. Also
collected by Kerm.

The base of the stem^{is} want-
ing in the specimens; but the
plant appears to be wholly her-
baceous. Leaves opposite, the
somewhat dilated petioles an
inch or two in length. Leaflets,
or the similar leaves when undi-
vided, from $1\frac{1}{2}$ to 3 inches long,
8 to 16 lines wide, acuminate, pin-
nately veined, rather thin, sharply
and somewhat coarsely serrate
except at the base, which in
the leaflets is commonly cuneate,
the lateral ones serrate, the three
uppermost often slightly confluent.
Peduncles solitary and
simple, terminal, an inch or
two in length. Head hemis-
pherical, an inch in length,

do. sp. n.
1. *Baideno* (*Camphylthea*) *comai*
Baideno *glabra*; *artic* 3-5-*fitula*
to

Involute: in the specimen from Kuny's collection remarkably foliaceous, ~~the~~ in the single specimen of our collection less so, equalling the disk-corollas in length. Ligules yellow, an inch or less in length, incisely 2-3-cleft at the ^{neutral} summit, Corollas of the disk yellow. Anthers brown, wholly exserted, nearly 3 lines long. Styles filiform, projecting to the length of 3 or 4 lines beyond the anthers, their short branches ~~with~~ thickened and beset with yellow hairs at the summit and tipped with a very conspicuous slender subulate appendage. Mature achenia not seen. The oldest examined are 3 lines long, half a line wide, compressed, marginless ^{and beakless}, already beginning to curve, glabrous or very sparsely

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hispid on the faces, but the margins ciliate with ^{very} stout and ascending hispid bristles; and a closer circle of ^{similar short} bristles at the apex imitates ^{or represents} a setulose-crown form pappus: the margins of the achenium ^{each} bear ~~at or usually~~ a little below the actual summit, at least outside the setulose crown, an erect awn or rigid seta, - either scarcely longer than the neighboring bristles or of twice that length, often as long as the breadth of the achenium, - which is probably persistent, and is either naked or beset with two or three erect setulae. - This is evidently a Campylotheca, and the largest-flowered species known.

Plate

Head of fruit of plant

from my collection of plants from the
 of the R. R. station. The flower with stamens
 style magnified

Sp. Nov. (Tab.)

7. Coxeopsis (Campylotheca) Menziesii, 1

C. suffruticosa, ^{fere} ~~plurimigera~~ glaberrima, corymboso-ramosa; foliis bipinnatis- (vel subternatis-) sectis, summis 3-5-partitis, segmentis longe anguste linearibus integerrimis; capitulis parvis plurimis ~~corym-~~ in corymbum digestis breviter pedunculatis; involucro exteriori breviori; acheniis angustissime linearibus elongatis glaberrimis apice calvis ~~vel~~ rarius obsolete ¹⁻²⁻ ~~unig~~ setulosis, exterioribus saepe tenuiter subulatis, maturis leviter flexuosis vel tortis. — Variat, in floriscentia: foliisque superioribus (segmentis nunc laciniatis) pl. m. pubescentibus.

Campylomeca australis, pro parte? Less.
in *Linnaea*, 6. p. ~~244~~ 509.

Stat. Mountains of the western part of Maui, Sandwich Islands: and a depauperate, somewhat pubescent variety with shorter leaves in the district of Maima, Hawaii. Also collected on Hawaii by Menzies and by Remy.

Stem evidently woody at the base; the branches herbaceous. Leaves all opposite (as in the other species), ^{entire} in slender petioles; their divisions in the luxuriant specimen from Maui from 2 to 5 inches long, and not exceeding two lines in width, in Remy's and other specimens not above an inch and a half in length, and less than a line wide. Common peduncles one or two inches long, bearing numerous corymbose heads. The latter (exclusive of the 4 or 5 rays)

are only about 2 lines long,
narrow, and rather few-flowered.
Ligules yellow, neutral, 3 lines
in length, oblong, obscurely toothed
at the apex. Disk-flowers 7 to 10.
Appendages of the style tipped
with a subulate point. Ovaries
oblong, ^{obcompressed,} very glabrous, the exterior
and sometimes the inner ones also
narrowly wing-margined, desti-
tute of pappus and even of
setula at the summit, ~~or~~
except occasionally a solitary
one or a pair of minute ones
which ^{appear} represent the ~~anthers~~ van-
ishing anthers; sometimes these
are on the wing below the sum-
mit. Hill-grown achenia
very slender, ^(almost filiform) and 6 to 8 lines long,
or the exterior ones shorter and
broader, 4 or 5 lines long, and
with a distinct but very narrow
and thin winged margin, inclined

to curve or twist, but much
less so than in the following
species.

(Tab.)

8. Cercopssis (Campylothea) micrantha

C. ^{basi} suffruticosa, glabra, panic-
ulato-ramosa; foliis pinna-
tim 3-7 sectis partitisve, sum-
mis nunc indivisis, segmentis
lanceolatis seu oblongo-lan-
ceolatis grosse argute ser-
ratis nunc incisís nunc 3-
5-fidis venosis; Capitulis par-
vis plurimis corymbosis; invo-
lucris subaequilongis; acheniis

elongatis angustissime linearibus
glabris exalatis apice nudis
aut truncato aut saepius ~~muc-~~
rones vel aristulas breves 1-2
laeves gerentibus, maturis brun-
neis arcte spiraliter contortis.

Bidens micrantha, Gaudich.
Bot. Voy. Freyc. p. 464,
t. 85. ~~Ib. Prodr. 5. p. 573.~~

Campylithea micrantha, Bass.
in Dict. Sci. Nat. 57, p. 475,

~~Ib. Prodr. 5. p. 464, excl. B.~~

C. australis, Less. in Linnaea,
b. p. 509, pro parte, excl.
syn. Forst. & Spreng.

Stat. Sandwich Islands;
Kaala Mountains, ~~and~~ H. Oahu.
Also collected Merries, Gaudi-
chand, Chamisso, H.; and by
Kenny upon Maui (no. 280).

Stems ligrescent at the base, apparently from one to three feet high, smooth. Leaves most commonly quinquefoliate, ^(occasionally 7-foliolate) with the upper leaflets somewhat confluent, ~~occasionally 7-foliolate~~ rarely only trifoliolate or three-parted. Leaflets broadly lanceolate or somewhat oblong, acuminate, membranaceous, $1\frac{1}{2}$ to 3 inches long, strongly serrate with sharp teeth, sometimes lacinate or pinnatifid-incised, sometimes inclined to a biternate division, the lower pair commonly petiolulate. Common peduncles one or two inches long, bearing numerous small heads in a loose corymb, on slender but rather short pedicels. Involucre narrow, 2 lines long. Siqules 4 or 5, ventral, yellow,

oval, 3 lines long, entire or nearly so. Disk-flowers 7-10. Ovaries ~~curvate-oblong~~ glabrous, thickish, moderately obcompressed, somewhat costate at the margins but wingless, the truncate apex naked and smooth, sometimes destitute of pappus, but the edges are in most cases extended at the summit, ~~into~~ one or both of them, into a short tooth or arm, ~~which does not~~ longer than the breadth of the ovary. The teeth or short arms are either glabrous or ~~bear~~ they bear one or two small, upright bristly hairs. The achenia become long and narrow, as in the preceding species; commonly they are 4 to 6 lines long, almost filiform, not winged and but indistinctly margined, either

naked at the apex or minutely
bistaristulate, when mature
recurved and twisted into a
spiral.

The specimens in the collect-
ion belong to a variety with more
dissected leaves than in Gaudichaud's
figure; to which Kuny's
no. 285 answers well, except
that the leaves are more sharply,
almost laciniately, serrate.
Lessing must have had before
him, in Chamisso's collection,
specimens like ours with ~~divi~~
lobed leaflets, and also some of
C. Menziesii. Probably the
fruit, said to be "anguste alatum"
was of that species.

Chamisso

Specimen of C. Menziesii

Bidens,ourn.

1. Bidens Sandwicensis, Less.

B. herbacea, glabra; foliis membranaceis plerisque trisectis, segmentis ovatis seu ovato-lanceolatis acuminatis argute serratis, lateralibus petiolulatis vel sessilibus; capitulis laxe corymboso-paniculatis parvis radiatis; involucri phyllis linearibus glabris ^{apice nunc macula glandulifera instructis} ~~atque~~ ^{apice} ~~achernis~~ ^{apice} ~~anguste linearibus~~ ^{apice} glabris vel marginibus parce hispidulis apice setulosis nunc exaristatis nunc aristulis 1-2 ~~subulatis~~ ^{parce} aut nudis aut ~~retrosum~~ ^{parce} hispidulis superatis.

Bidens Sandwicensis, Less. in
Linnaea, 6, p. 508.

B. micrantha, Hook. & Arn. Bot. Beech.
Voy. p. 86, non Gandich.

B. peduncularis, DC. Prodr. 5, p.
598, quoad pl. Sandwic. &
syn. Less., non Gandich.
Bot. Voy. Haecke.

B. nutica & B. gracilis, Nutt. in
Trans. Amer. Phil. Soc. n. ser.,
p. 368.

Andropogon pilgellia Less. in Linnaea, 6, p. 511; DC. Prodr. 5,
Campylothea micrantha, Boiss.
in Herb. Mus. Par. coll. Remy,
no. 279.

Var. β . heterophylla: caule basi
suffruticoso? foliis longe
petiolatis plerisque sim-
plicibus oblongo-lanceo-
latis acumine longo inte-
gerrimo caudatis basi
attenuatis, paucis trise-
tis segmentis lateralibus
sublinearibus; acheniis
plerumque biaristulatis.

Bidens luxurians, Hook.
& Arn. Bot. Beech. Voy.
p. 86.

Var. γ . ovatifolia: caule herbaceo;
foliis simplicibus ^{subcordatis} ovatis
longissime petiolatis; varicis
coronula petularum superas-
tis exaristatis.

Hub. Oahu, Sandwich Islands.

Var. γ . on the mountains behind Honolulu.

lulu, Var. β . Hawaii, Kemy (no. 281), &c.,
No specimens of the ordinary trifoliolate form
~~occur~~ in the present collection; but it
(apparently with pinnatifid leaves also),
was gathered by Chamisso, Collie,
Seemann, Nuttall, Kemy, and others. If
Gaudichaud collected it, as is proba-
ble, it was not in Freycinet's
voyage; at least it is not the plant
described by him, ^{under the name of *B. pedunculata*,} and said to come
from the Molucca Islands. Les-
sing characterizes ~~the species~~
not badly, the ordinary form
of the species when he ^{likens} ~~compares~~
it ~~with *B.*~~ to *B. leucantha* in
general appearance but with
much smaller heads, yellow
rays, and short awns which
are retrorsely barbed only towards
the summit. These awns are pe-
quently ^{and naked,} minute or obsolete, But
whether ^{aristulate} ~~armed~~ or ~~awnless~~, the wa-
ves and ^{either sparsely hispid or the margin wingless, and} ~~achena~~ (which are not
curved nor twisted), are setulose-
hispid at the summit; which
is not the case in *Campylothea*

cons. x 100 magn.

micrantha, for which it has more than once been mistaken. When the aures develop completely they are often half a line or more in length, and minutely hispid downwards, either for their whole length or only near their base or summit. So that the plant is manifestly a Bi-
dens.

Moreover, the awnless state is manifest by Lessing's Adenolepis. The little thickening at the tip of the scales of the involucre, which was taken for a gland.

The var. B. is evident by Hooker and Arnott's B. luxurians, but not at all B. arguta, H.B.K. I have it only from Kemy's collection, in which the leaves (or terminal leaflets) are serrate in the middle only, attenuate below into a very slender petiole, and above into a conspicuous tail-like acummation.

The var. V. has similar petioles, about two inches in length, the lower ones almost as long as the simple, ovate or oblong-ovate, moderately acuminate blade. The achenia are unknown: but the ovaries are like those of the muticous forms of states of *B. Sandwicensis*, to which ^{species} it doubtless belongs.

B. paniculata, Hook. & Arn. ^{from Tahiti} take to be another simple-leaved variety of *B. Sandwicensis*, with the achenia rather more developed ~~than~~ is usual, and more barbed than is usual.

B. angustifolia, Nutt. l.c. is probably another form with dissected and narrower leaves. From the character it cannot be *Gnaphalium Menziesii*.

2. Bidens ^{Hawaiensis,} ~~insularum~~, sp. nov.

B. Herbacea, glaberrima; caule
elato ~~superne~~ paniculato
ramoso polycephalo; capitulis
conymbozo - paniculatis; foliis
omnibus simplicibus longe
petiolatis oblongis vel ovatis
acutis vel acuminatis, ^{crebre} ~~asym-~~
serratis crassiusculis; involu-
cri glaberrimi, phyllis lineari-
bis obtusis, ^{eciliatis}; ligulis 7-8 elan-
gatis; achenis anguste line-
aribus glabris apice nudo
breviter bicristatis, aristis
erectis retrosum barbatis.

Hab. Hawaii, Sandwich
Islands, in the District of Waimea
and elsewhere, at the base of Mon-
na Loa, and near the crater
Lua Pele.

A perfectly glabrous herb,
with a considerably branched stem,
three feet high or more; the
branchlets bearing rather numer-
ous heads in a loose corymb
or panicle. Leaves of a firm
texture, ^{somewhat cuneate or roundish at the base} very smooth, and the up-
per surface often shining, 1 1/2
to 3 1/2 inches long, ovate-oblong
varying to lanceolate-oblong or
to ovate; the primary veins numer-
ous, rather straight and conspicuous
on the lower surface; the petioles
of the lower leaves ~~are~~ fully an
inch long. Heads twice or thrice
the size of those of any form
of the preceding species; but the
involucre very similar; the disk
in flower 3 or 4 lines in length,
and when the fruit is well devel-
oped ~~half~~ fully half an inch
long, many-flowered. Ligules
oblong, bright yellow, 5 to 9 lines

in length. Achenia 5 or 6 lines long, half a line wide, flat, glabrous, or rarely with a few ciliate ^{bristles} on the margins, smooth and not at all setulose at the apex; the ^{two} slender erect achenes at most a line and a half in length, barbed with ~~rigid~~ and very strongly reflexed bristles or barbs, which are stout and rigid for the size of the achenes.

Specimens wholly destitute of flowers, ticketed as from the Feejee Islands, may belong to this species.*

* On Hawaii Kery collected what appears to be a new *Bidenas* (no. 287), with 3-5-parted leaves, of which my materials are imperfect. Also, upon Kauai or Niihau (no. 258 bis), *B. chrysanthemoides*, a form with the involucral leaves not ciliate, not uncommon in the United States, and the same as *B. helianthoides*, H.B.K. of Mexico and of Chili.

Statis retrorsum aculeolatis.

Var. a. Taitensis: capitulis parvis
(punctatis tantum 3 lin. longis)
; acheniis parce hispidulo-cili-
atis, aristis ~~brevibus~~ ~~pe-~~
~~brevibus subpatentibus.~~
~~B. paniculata, Vog. & Arn.~~
~~Bot. Beech. Vog. p. 55.~~

3. Bidens Lantanoides, Sp. Nov.

B. fruticosa, ramosa, Minutulo-
pubescens; foliis omnibus sim-
plicibus ovalibus oblongisve
creberrime serratis petiolatis;
pedunculis solitariis monoceph-
alis folia subaequantibus; in-
volucri exterioris phyllis line-
ari-oblongis discum aequan-
tibus; ligulis brevibus; acheni-
is linearisubtetragonis margini-
bis apiceque hispidulis breviter
vel brevissime biaristatis.

Var. β . glabrata; magis herbacea;
foliis utrinque attenuatis;
capitulis subpaniculatis.

Stat. Eimeo, Society Islands;
the very imperfect specimen of the
doubtful variety from Tahiti.

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The above character is drawn up from insufficient specimens of a shrubby species, apparently well-marked, having a general resemblance to a Lantana in foliage and habit. All the young parts are hirsute with a fine, rusty pubescence, the older leaves, &c., are glabrate. Leaves crowded on the flowering ^{if a firm texture,} shoots, $\frac{1}{2}$ an inch and a half in length, less than an inch broad, slightly or abruptly pointed, densely and somewhat crenately serrate, rather cuneate at the base or abruptly contracted into a petiole of 3 or 4 lines in length. Peduncles solitary and terminal about an inch long. Head hemispherical, about 4 lines in diameter. Scales of the outer involucre thick, linear-oblong, hirsute-pubescent, 8 or 9 in number. Ligules 5 or 6,

oblong, little exceeding the disk,
Achenia 3 lines long, narrower,
hispid along the margins and at
the summit with rather sparse
and rigid short bristles; the
awns barely half a line in
length, often shorter, and some-
times one or both obsolete or
evanescent, when present al-
ways retrorsely barbed.

The specimen of the doubt-
ful variety is glabrate, and
with leaves approaching those
of the preceding species; the
awns of the achenia are some-
times elongated and recurved at
maturity. The specimens are
too imperfect for proper deter-
mination.

4. Bidens pilosa, Linn.

Stat. Madeira, Cape Verde
Islands, New Zealand, Tahiti,
Fiji Islands.

5. Bidens subalternans, DC.

Stat. Brazil, in the vicinity of
Rio Janeiro.

6. Bidens californica, DC.

Stat. Peru, at Lima and Callao.

More hairy than Douglas's
Californian specimens; but otherwise
similar. The was probably trans-
ported to the coast of California.

7. Bidens leucantha, Willd.

Stat. Madeira, Rio Janeiro.
Peru, between Lima and Obrajillo.

8. Bidens bipinnata, Linn.

Stat. Peru, near Obrajillo.
A very imperfect specimen: apparently
not B. chilensis, DC.

9. Bidens Andicola, H.B.K.

Stat. Baños, Andes of Peru. A hairy
form of the species, nearly agreeing
with B. hispida, H.B.K., which
Noddell reduces to a mere variety
of B. Andicola, except that the
head is radiate.

10. Bidens scandicina, H.B.K.

Stat. Baños, Andes of Peru. Ap =

parently the same as the Quin-
tensian species, but more hairy.

11. Bidenis humilis, HBK.

Stat. Casa Cancha, in the
high Andes of Peru, above Ota-
jillo. A condensed and dwarfed
form of the species.

Thelesperma, Less.

Thelesperma, Less. in Linnaea, b. p.
511, & Syn. p. 234; DC. Prodr. 5. p.
633; Gray in Kew Jour. Bot. 1.
p. 252, & in Pl. Wright. 1. p. 109,
2. p. 90, & in Mex. Bound. Surv.
2. p. 90.

Cosmidium, Torr. & Gray, Fl. ^(N. Amer.) 2. p. 350;
Gray, Pl. Fendl. p. 86.

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(Tab.)

1. *Thelesperma scabiosoides*, Less.

T. radice perenni; foliis ~~et~~ segmen-
tisque filiformibus; capitulis
eradiatis; involucri interno usque
ad medium octofido, exterius bis
terve superante.

Bidens Megapotaica, Spreng.
Syst. 3. p. 454.

Thelesperma scabiosoides, Less.
l.c.; DC. l.c.; Hook. & Arn. in
Journ. Bot. 3. p. 319; Gray, l.c.

Hab. Plains of the Rio Negro,
North Patagonia.

Good flowering specimens were
collected but no mature fruit. The
Thelesperma gracile, of the Plains of
Texas, Kansas, &c., so closely resem-
bles the species of the ~~same~~ counter-
part region of the Southern Hemisphere

That, if they grew side by side,
it is ~~not~~ unlikely they would have
been specifically distinguished. The
leaves are somewhat more slender
in the Patagonian species; the
~~the~~ principal involucre cleft
quite to the middle of the edges
of the lobes narrowly scarious in
both), and the segments ^{or bracts} of the
outer involucre reach nearly to
the sinuses of the inner. That
the mature achenia are vermose
or tuberculate-roughened on the
back, as in the other species, ~~ap-~~
~~pears~~ (although the character is
omitted by DeCandolle) appears from
the detailed description in the
Linnaea, as well as from the gener-
ic name. The leaves are for
the most part three-parted or

Plate Thalesperis a scabi-
osoides.

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pinnately five-parted; but the uppermost are often simple, and or some of the lower ones sparingly bipinnately or biternately divided.

Plate. Thelasperrma scab-
osoides: Plant of the natural size,
Fig. 1. A chaff of the receptacle,
2. A flower. 3. A stamen. 4. Style
and stigmas. The analyses vario-
usly magnified.

Glossogyne, Cass.

1. Glossogyne tenuifolia, Cass.

Glossogyne tenuifolia, Cass. in
Dict. Sci. Nat. 51, p. 475; Ob. Prodr.
5, p. 472

G. pedunculosa, Ob. l. c. var.
pedunculis simplicibus monoceph-
alis.

Bidens tenuifolia, Labil. Sert. Austr.
Cal. p. 44, t. 45.
By pinnatifida, Forst. in Herb. Mus. Par.?
Coccyssis e. Tanna, Forst. Prodr.
p. 81.
C. Tannensis, Spreng. Syst. 3. p.
514.

Itab. Feejee Islands; a state
with numerous and fascicled heads,
the fruit more or less abortive.
Hunter's River, ^{New South Wales} Australia; the
normal form: also Woolongong;
a form with mostly scapiform
and simple peduncles, apparently
G. pedunculosa of DeCandolle.

Himenesia, Bar.

1. Himenesia encelioides, Bar.

Stat. Rio Janeiro, Brazil. (Probably of Mexican origin, now widely scattered. The other remaining species, H. microstera, apparently is not distinct.)

Verbesina, Lin.

1. Verbesina helianthoides St. B. K.?

Stat. Peru, near Obrajillo.

This I suspect to be Verbesina helianthoides, ^{of Stuyvesant's collection,} the habitat of which is not recorded. The stem, however, is winged below by the decurrent bases of the leaves, and the well-formed achenes are generally rather broadly winged on one side only. The wings both of the stem and of the fruit are inconstant in this genus.

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Spilanthes, Jacq.

1. Spilanthes (Arnella) Lundii, DC.

Spilanthes Lundii, DC. Prodr. 5. p. 622

Stat. Brazil; base of the Organ Mountains near Rio Janeiro, in marshes.

In the present, as also in ^(an) original specimen of this species, the scales of the involucre are somewhat ciliate. The slender awns of the pappus are fully half the length of the acheneum, and longer than the copious hairs which fringe it.

2. Spilanthes bleph

Pa. DC.

2. Spilanthes (Acmella) blepharicaarpa

Spilanthes blepharicaarpa, DC. Prodr.
5, p. 620.

S. Melanioides, Hook. & Arn. in
Jour. Bot., 3, p. 317.

Hab. Rio Negro, North Patagonia.

A well-marked species, having the aspect of an Acmella; Hooker and Arnott do not describe the achenia. To be bound Meis character I may add that the large-fringed achenia are rather deeply notched at the summit, owing to the projection of a strong and usually blunt tooth from each margin (the ray-achenia strongly trigonous), of a strong and usually blunt tooth which bears a slender, pilose, and somewhat deciduous awn. Ligules about 5 lines long, bright yellow. Receptacle

acutely coriaceous, at length 4 or 5
lines long. Some of the larger leaves
are sparingly angulate-toothed.

3. Spilanthes (Aemella) Poeppigii, ^{L.C.} DC.

Hab. Peru, at Lima and Obra-
jillo. Forms with the peduncles
elongated; probably not different from
S. Mutisii.

4. Spilanthes Pseudo-Aemella, Lin.

Hab. Manila, Luzon.

The marginal achenia are trique-
trous and more or less triaristate; but
their corolla is tubular, not ligulate;
so this is one of the forms which con-
nect S. Aemella with S. Pseudo-Ae-
mella, and confirms the union which
Linnaeus anticipated.

5. Spilanthes (Salivaria) alba, Willd.

Stat. Peru, between Lima and Obrajillo: A common Peruvian species.

Spilanthes (Salivaria) usens, Jacq. var. hispidula, B. & C.

Stat. Peru, in the vicinity of Callao.

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Wollastonia, Db.

1. Wollastonia biflora, Db.

Nerpesina biflora, Linnae. Spec. ed. 2.
p. 1272. (Rhede Hort. Malab. 10.
t. 40.)

Wollastonia biflora, scabruscula, (glabrata, canescens,
glabrosa (pro parte), Db. Prodr. 5. p. 547.

Hab. Mangri Islands, and in the
vicinity of Manilla, Luzon. Also
Tahiti, Society Islands; a form with the
large leaves rather softly canescent-
pubescent underneath.

The five species of De. Benth. cited
above may be rather confidently
reduced to one, which may be dis-
tinguished from the following by ~~the~~
looser and narrower, lanceolate or oblong-
lanceolate and more or less acuminate
scales of the involucre, and perhaps more

incrassated achenia. It apparently includes Gandichan's Nubosina strigulosa^{and} Lessing's Nedelia aristata. In which species Forster's Burphthalum ^(Springer's B. australe) helianthoides belongs is uncertain.

2. Wollastonia Forsteriana, Db.

Burphthalamum uniflorum, Forst. Prodr. p. 91 (abs. char.); Spring. l. c.

Nedelia Forsteriana, Endl. Prodr. Fl. Novf. p. 5.

Wollastonia Forsteriana, Db. Prodr. 5, p. 548; Endl. Iconogr. t. 88; forma ~~pauciflora~~ oligocephala.

W. insularis, Db. Prodr. l. c.

W. strigulosa, Sum. in Burph. 1861, p. 207.

Stat. Samoa, Tonga, and Feejee Islands. Also on a small island in the Soloo Sea.

Nearly all the specimens are polycephalous and with awnless achenia, the foliage of some of them glabrate but mostly canescent beneath. The shorter ~~involucres~~ ^{and none} ~~more numerous, appressed~~ and imbricated involucre, of ovate or oblong and obtuse scales, and the less thickened achenia, distinguish this from the preceding species. The heads are usually smaller.

Lipochata, DC. (excl. Spec. Amer.)

Lipotriche, pr. parte, Less. in Linnaea, b. p. 510, & Syn. p. 231, non R. Br.

Verbesina Spec. Gaudich. Hook. & Arn.

Lipochata, DC. Prodr. 5, p. 610, excl. Spec. Amer. (i.e. Rexmenia spec.)

Microchata, Nutt. in Trans. Amer. Phil. Soc. (n. ser.) 7, p. 450, excl. spec. Nollastonia.

Schizosphyllum, Nutt. l. c. p. 452, (non Fries.)

Aphianopappus, Endl. Gen. suppl. 2, p. 43.

Macraea, Hook. f. in Pinweed. Linn. Soc. n. 28, p. 278, & Linn. Trans. (Hb. Galap.) p.

Trigonopterum, Anders. Veg. Galap. in Voy. Eugen. Bot. t. 6, f. 1.

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That all the following *Sandwichian* species are congeneric, notwithstanding their diversified habit, and the complete abortion of the short awns or chaffy scales of the pappus of the latest-enumerated one, I have no doubt: also that Dr. Stokes's *Macraea* (Andersson's *Trigonostemon*) of the Galapagos is another species, in which the coronula of the pappus is generally a little trifle more developed, and the awns obsolete, but not always entirely wanting. To merge all these plants in *Nollastonia* (which shows no tendency to winged achenia) would hardly be permitted, although the earlier species would not appear widely out of place there. On the whole it will be more difficult clearly to ~~distinguish~~ separate ~~this~~ them ~~group~~ from *Nedelia* on the one hand and from *Texmeria* on the other. Since the last-named genus takes in all the American species of

DeBardoll's genus Lipochata, and since the latter was essentially founded upon Lissing's Lipotriche, and this mainly upon the leading Sandwichian species, it is evident that (as I have formerly stated) the ~~same~~ present group, if maintained, should in strictness retain the name of Lipochata. If the rule of priority be waived on account of the inappropriateness of that name to one or two of the species, the succession would most appropriately fall upon Macraea. But convenience ^{in this case} ~~here~~ coincides with precedence in maintaining the ~~rule~~ strict rule. L. laricifolia (Macraea laricifolia Hook. f.) and L. micrantha, though not very ~~congen~~ congruous in habit, may be conveniently associated under the sectional name of Aphanosapphis.

1. Lipochata australis.

L. suffruticosa, hirtello-scabra, vel
hispidula; foliis ovatis ovato-lan-
ceolatisve 3-5-plinerviis acuminatis
argute serratis nunc incis ~~is~~
aut sessilibus aut in petiolum
brevem marginatum decurrentibus;
involueri squamis ovato-lanceola-
tis subacuminatis.

Liptriche australis, Less. in Linnaea,
6, p. 560.

Var. a. cornata: foliis sessilibus basi
nunc angustata cornatis nunc
late cornato-perfoliatis amplexi-
caulibus.

Verbesina cornata, Gandich. Bot.
Freyc. Voy. p. 464.

Lipochata cornata, St. Prodr. 5, p. 611.
Microchata cornata, Nutt. in Trans. Amer. Phil. Soc. (n. ser.) 7, p. 482.

Var. β . decurrens: foliis basi in petiolum plerumque alaturis contractis, lamina nunc ovata seu rhombea nunc oblongo-lanceolata, in latifoliis saepius ^{anguste} duplicato- vel laciniato-serrata.

Microcheta lanceolata, Nutt. l.c.,
est forma angustifolia?

Var. γ . lobata: foliis subsemilibus vel breviter petiolatis basin versus utrinque lobatis seu laciniato-dentatis.

Verbesina lobata, Gaudich. l.c.;
Hook. & Arn. Bot. Beech. p. 87.
V. hastulata, Hook. & Arn. Bot.
Beech. l.c.

Lippocheta lobata & hastulata,
J.B. Prodr. 5. p. 611.

Microcheta lobata & var. hastulata, Nutt. l.c.

Stat. Sandwich Islands, gathered by most collectors. Var. a. in the present collection only from the western part of Maui; and from Kauai. β . With the preceding ^{in various} forms; also Hawaii near Hilo. N. Kaala Mountains, Pahoe.

The above are manifestly all forms of one polymorphous species, for which, as a whole, neither lobata nor comata is an appropriate name. I therefore adopt the nearly as old specific name of Lessing, who described forms with mostly undivided leaves. Pappus of 2 or 3 short chaffy awns or ~~see~~ narrow scales. An epigynous gland at the base of the style of the disk-flower fills the bottom of the tube of the corolla in all the species.

2. Lipprochata subcordata, Sp. Nov.

L. herbacea? erecta, cinereo-strigulosa; foliis detroideo-subcordatis acuminatis duplicato-serratis reticulatis longe petiolatis, petiolis gracilibus; involucri squamis ovato-oblongis obtusiusculis.

Hab. Hawaii, Sandwich Islands, on the sea-coast south east of the crater Lina Pele.

Only a single specimen was preserved, and it has not been met with in any other collection. Apparently it is sufficiently distinct from any form of the foregoing species; but its principal character is in the petioles. These are an inch long, slender, and marginless, almost half the length of the blade, which is ~~some-~~ somewhat cordate or truncate at the

base, with only a slight decurrent portion, not surpassing the depth of the sinus. The leaves, &c. are cinereous with a close and slightly scabrous strigulose pubescence; the veinlets conspicuously reticulated, the basal lateral ribs rising from just within the lamina. Peduncles slender, the middle one monocephalous, the lateral tricephalous. Heads resembling those of *L. australis*, rather small; the scales of the involucre blunter, about the length of the disk. Mature achenia not seen; those of the ray are evidently triquetrous, smooth below, pinnate at the summit, the angles above show the rudiments of a narrow and lacinated or ^{denticulate} ~~interrupted~~ wing, the summit crowned with a pappus of three or four short squamellate hairs and some minute intermediate ^{setulose} squamellae; those of the disk apparently infertile and compressed, mostly bicaristulate.

3. Lipochata calycosa, Sp. Nov.

L. fruticosa, hispidulo-scabrida;
foliis lanceolatis oblongisve ob-
tusis obsolete subserratis vix
triplinerviis brevissime petiolatis;
involueri squamis 5-8 ovalibus
seu obovatis obtusissimis foliaceis
discum subsuperantibus; paleis
receptaculi convolutis truncatis.

Hab. Diamond Hill, Oahu,
 Sandwich Islands.

This truly distinct species oc-
 curs in no other collection. The
 stems appear to be more decidedly
 lignescent than in the other species.
 The leaves are green, moderately
 scabrous, ^{rather thin,} and varying from oblong
 or oblong-ovate to lanceolate, $1\frac{1}{2}$
 to 2 inches long, ^{and} from half an inch
 to an inch in width, or those of

the branchlets less than inch long,
 all obtuse, obscurely serrate or
 almost entire, their veins inconspic-
 uous; the petioles less than two lines
 in length. Peduncles slender, 2 or 3
 inches long, mostly naked and mo-
 nocephalous. Heads rather larger
 than in L. australis; the involucre
 conspicuously different, consisting as it
 does of from 5 to 8 laxer, more foli-
 aceous, broadly oval or slightly ob-
 ovate, very obtuse, equal scales,
 which somewhat exceed the disk.
 Rays about 12, oblong-linear, yellow.
 Pales of the receptacle shorter than
 the disk-flowers, as in the rest of the
 genus, in this species remarkably
 broad, abruptly truncate, and convolute
 around the achenia. Achenia of
 the disk apparently almost as fertile as
 those of the ray, the outermost tri-
 angular, the inner compressed, all
 more or less pubescent at the top,
 mostly wingless, the two or three ~~rows~~

awns nearly equalling the slender
tube of the corolla, rather stout
and persistent, connected by a
~~crown~~ of pretty conspicuous crown
of concreted squamella.

4. Lipochata lavarum, ^{DC.} ~~Gaudich.~~

Verbesina lavarum, Gaudich, Bot.
Freyc. Voy. p. 464.

Lipochata lavarum, DC. Prodr.
5. p. 611.

Stat. Hills and barren moun-
tains near the coast of West Maui,
Sandwich Islands. Collected by
Gentry and recently by
Kenny on Hawaii.

Well marked by its silvery-canes-
cent (but scarcely strigose) leaves. These
vary from narrowly to broadly lance-
olate or oblong, from one to three inches

in length, the veins and triple ribs conspicuous beneath. Scales of the involucre oval or ovate-oblong, obtuse, appressed, biserial, shorter than the disk. Rays 8 to 10, elongated, yellow. ~~Leaff~~ Pales of the receptacle obtuse. Achenia all fertile, short and thick, very variable ~~as to the wings, &c. as is usual in~~ (in the manner of Verbesinoid genera generally) as to the wings, &c. The radial achenia of the present collection are conspicuously three-winged, ^{entire or laciniated,} the wings ^{dividing} upwards and extended into a salient process as long as the pappus, but entirely free from the latter; the disk-achenia either two-winged, or winged only from the inner edge, often with ~~two~~ one or two small tooth-like processes at the summit outside of the pappus. The latter consists of two or three stout, pubescent,

more or less clavate and blunt
 aurs or ~~paleae~~, paleae, about
 a third or a quarter the length of
 the achenium, ~~with or without~~
~~manifest intermediate~~
~~small intermediate minute~~ squamule.
 In Remy's specimens from
 Hawaii, the achenia are smaller
 and wingless or nearly so, but the
 border of their flat summit ~~bears~~
 often bears ~~the~~ two or three tooth-like
 processes; the aurs similar or smaller.

5. Lipochata integrifolia,

L. herbacea e radice lignescente,
humifusa, ramosissima, minutim
sericeo-canescens; foliis sub
subcarnosis parvis spatulatis
linearibusque integerrimis,
venis haud perspicuis; pedunculis
solitariis terminalibus; involucri
squamis biseriatis ovatis vel

Staudis obtusissimus Disco
bravioribus; paleis receptaculi
obtusissimis.

Microcheta integrifolia, Nutt. in
 Trans. Amer. Phil. Soc. (~~ser. 2~~)
 n. ser.) 7, p. 451.

Hub. Sandwich Island:
 Diamond Hill, near Honolulu,
 Oahu; and Sandhills of Hawaii,
 the coast of Maui. Collected like-
 wise by Gandichand and Kemy
 as well as by Nuttall.

A close congener of L. lavarum,
 but procumbent, somewhat fleshy,
 very leafy; the leaves less than
 an inch long, varying from oblong-
 spatulate to linear, very obtuse, cin-
 reous or canescent, the veins hidden
 or sometimes manifest underneath in
 the dried state, the venation similar
 to that of L. lavarum. Peduncles

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equalling or exceeding the leaves.
Head small. Rays yellow, short,
or sometimes rather long. Achenia
nearly as in the preceding species,
but generally less winged. The stam-
ens or styles of the pappus sim-
ilar.

Lipochata succulenta, DC. (Verbe-
sina, Hook. & Arn.) ranges between
L. integrifolia and L. australis: like
the former it has the habit of Eclip-
ta. The leaves are not absolutely
glabrous, but under a lens show
some sparse and minute strigose
hairs. It does not occur in the
present collection, but Kemy
gathered it both upon Nihoa
and Kauai.

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L. Lipocheta heterophylla, Sp. Nov.

L. suffruticosa, ramosissima, erecta,
aspero-hispidula; foliis plerisque
tripidis, segmentis oblongo-linearibus
sen linearilanceolatis den-
ticulatis nunc laciniatis vel inciso-
pinnatifidis; involucri squamis
late ovatis saepius acuminatis
disco parum brevioribus; paleis
receptaculi mucronatis. — Folia
nunc petiolata petiolis margina-
tis, nunc coruato-amplexicaulis.

Hab. Maui, Sandwich Islands:
the less-lobed form found on sand-
hills in the western part of the island;
those with dissected leaves on moun-
tains in the eastern portion.

Apparently a low, erect, suffru-
tose plant, rough with short hispid
pubescence. Leaves from one to three
inches in length, veiny, the lowest

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sometimes nearly entire; the ~~Athers~~ deeply three cleft toward the base; the divisions in the broader form 3 or 4 lines wide, obtuse, obscurely toothed, the middle one much longer, the lateral ones occasionally two-lobed; in the other forms the ~~Athers~~ divisions are narrower and acute, and either laciniately toothed or irregularly pinnatifid and incised. Peduncles slender, solitary or corymbose. Head about the size of those of L. australis; the involucre of shorter and broader, and usually abruptly acuminate scales. Rays about 10, linear-oblong, bright yellow. Achenia pubescent at the top, wingless, or obscurely winged near the summit. Pappus of 2 or 3 very short and squamellate awns or paleae, which are somewhat coroniform-concreted at their base. ~~The dissected~~

7. Lipochata tenuifolia, Sp. Nov.

L. herbacea, erecta, gracilis, fere glabra; foliis pinnatifidis, segmentis rhachique angustissime linearibus seu filiformibus integerrimis; involucri squamis lanceolatis discum adaequantibus; paleis receptaculi acutatis.

Stat. Oahu, Sandwich Islands, in the Kaala Mountains, near Waianae. Also gathered on Oahu by Kemy.

Except that L. heterophylla exhibits some transition, this species, with its finely dissected and slender foliage would hardly be ~~there~~ taken for a congener of L. australis &c. But the floral structure, ~~the~~ achenia, and pappus are the same. The weak and slender branching stems are from one to three feet in

height, smooth or nearly so; the branches very leafy. Leaves from one to three inches long; the slender rachis bearing 8 or 10 pairs of narrowly linear or sometimes filiform leaflets or segments, of unequal length (the larger ones about half an inch long), and a somewhat prolonged terminal one scarcely broader than the rachis. Peduncles terminating the branches, $\frac{1}{2}$ to 2 inches long.

Heads rather smaller than those of L. australis. Scales of the involucre biserial, about the length of the disk, broadly lanceolate, acute or acutish. Rays 8 or 9, rather short, yellow. Pales of the receptacle abruptly ~~encompassed~~ pointed.

Achenia 2-4-angled, the angles or some of them sometimes ~~scarcely~~ slightly winged, or a little produced at the summit. Pappus of 2 to 4 short and ~~and thickish~~, somewhat deciduous awns.

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8. Lipochatea (Aphanopappus) micrantha,

L. herbacea, minutim strigulosa;
caulibus gracillimis ramosissimis
diffusis; foliis tenuibus bi-tripin-
natispartitis, segmentis parvis sub-
cuneatis saepe 2-3 lobatis bi-triloba-
tis; capitulis parvis breviter pedun-
culatis; involucri squamis exteri-
oribus lineari-spathulatis laxis,
interioribus oblongis; ligulis 2-3
ovalibus; fl. disci 6-8; acheniis
apteris, pappo obsolescente.

Schizophyllum micranthum,
Nutt. in Trans. Amer. Phil. Soc.
(n. ser.) 7, p. 452.

Aphanopappus (E. & L.) Nuttallii; Walp.
Repert. 2, p. 620, & 5, p. 170.

Ital. In shady woods of the
mountains of Kanai (^{Sandwich} Atoki) near
Koloa, where it was previously dis-
covered by Nuttall. Kery has more
recently collected it on the same island.

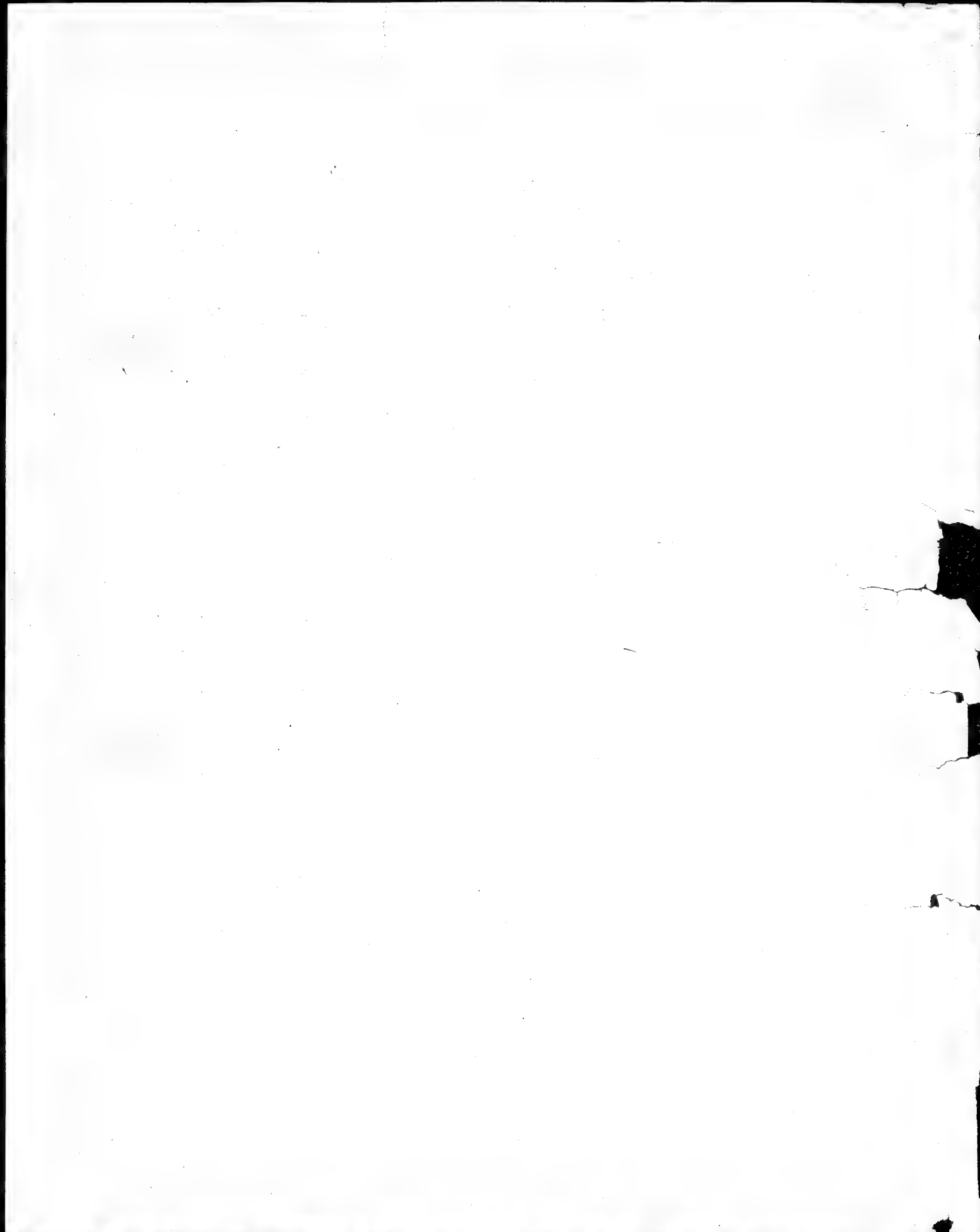
A slender, branching, leafy, diffuse herb, in habit resembling the ~~pre~~ foregoing species, but with smaller, fewer-flowered, and less pedunculate head (the narrow involucre scarcely above two lines in length), and 2-3-pinnately dissected leaves, the cuneate-oblong or obovate ^{segments} ~~lobes~~ of which are only a line or two in length. ^{Palea of the receptacle oblong, acutish,} Ligules 2 or 3, broadly oval, emarginate or bifid at the extremity. Corolla of the disk-flowers (as in most of the preceding species) with a campanulate or cup-shaped limb or throat raised on a narrow tube; the base of the latter filled by ~~the~~ ^{a conspicuous} epigynous gland or stylopodium. Ovaries pubescent at the summit, as in all the genus, the short hairs, or ~~some~~ a part of them, apparently forming a minute coriulate pappus, of which only vestiges ~~remain~~ remain upon the mature achenia. The ^{exterior achenia, whether} ~~achena~~ of the ray ~~are the most~~ or disk, are the most fertile and turgid, but the central ones are ~~not~~ by no means always.

infertile. They are short-obovate, the outermost 3-4-angled but wingless, the inner more compressed or lenticular. *

* I have from Kemy's collection, supplied by the Paris Museum, a specimen of what appears to be still another species of this group, - one which helps somewhat to fill the interval between L. micrantha and L. laricifolia: -

Lipochota (Aphanopappus) Kemyi, nov. spec.: herbacea, ramosissima, diffusa; cinereo-hirsuta; foliis oblongis petiolatis obtusis saepius parce dentatis vel sublobatis, superioribus alternis; capitulis parvis subpaniculatis breviter pedunculatis; involueri squamis oblongis obtusis; ligulis 5-7 obovatis brevibus; achenis radii praesentim ad angulos tuberculatis nunc interrupte subulatis; disci inanibus; pappo obsoleto. -

Oahu, Sandwich Islands, coll. Kemy, no. 260. - Stems 6-10 inches long. Leaves half an inch long. Heads 2-3 lines long. Disk-flowers perfect, but apparently infertile. Achenia all pubescent at the summit, those of the ray turgid.



Flaveria, Juss.

1. Flaveria Contrayerba, Pers.

Hab. Vicinity of Lima and Callao, Peru. [A species widely diffused over the warmer and drier parts of America, and becoming naturalized in other corresponding parts of the world.]

F. angustifolia, Pers. in some specimens appears sufficiently distinct, but others pass into F. Contrayerba.

F. Australica, Hook. is a ~~narrow~~ probably only a narrow-leaved form of the same species; but how and when ^{did it} find its way to Tropical Australia? Probably in ballast of Spanish vessels from ports of Western America to ~~Malacca~~ some Malaysian ports, where, however, it is hardly now met with.

As to the remaining species of the genus, F. longifolia, Gray, Pl. Fendl. p. 88 (which is Gymnosperma? oppositifolium, Lb.) is shown by a good suite of specimens in Berlandier's collection (no. 2263, 3173) to be no more than a variety of F. linearis, Lagasca, a native of Cuba, the Bahamas, and East

Florida. The leaves of specimens remote from the sea-coast are less fleshy, either entire or denticulate, in the largest forms elongated-lanceolate, tapering ^{gradually} from a base of 3 to 5 lines in width to an acute apex. F. chloro-
rofolia, Gray, from the same region, is a very distinct species of the same ~~group~~ corymbose inflorescence. I do not know F. Bonariensis.

Enhydra, Lour., Sl.

1. Enhydra maritima, Sl.

Hab. On the coast of Peru at Callao. (Abundant in fresh water. Heads sessile and pedunculate in the same specimens.)

Porophyllum, Vail.

1. Porophyllum ellipticum, Cass.

Hab. Brazil, near Rio Janeiro. Nearly the var. intermedium Sl., and the species doubtless includes P. rudérale.

Tagetes, Journ.

1. Tagetes glandulifera, Schrank.

Hab. Brazil, near Rio Janeiro,
Chile ^{at} ~~near~~ Santiago: a common
weed in South America.

2. Tagetes graveolens, L'Her.

Hab. Lima, Peru, among
garden rubbish: a small-leaved
form; otherwise ^{similar to} ~~same~~ as specimens
collected by Pavon, and also by Donbey.

3. Tagetes gracilis, Db.

Tagetes gracilis, Db. Prodr. 5, p. 645
Solenotheca tenella, Nutt. in Trans.
Amer. Phil. Soc. (n. ser.) 7, p. 272.

Hab. Obrajillo, Peru.

Guntheria, Sprang.

Guntheria, Sprang. Syst. 3. p. 356 &
449 (1826).

Polypsteris, Less in Linnaea, 6 (1831) p.
518, non Nutt.

Cercostylis, Less. Syn. Compos. (1832),
p. 239; Dc. Prodr. 5. p. 660.

(Tab.)

1. Guntheria Megapotaamica, Sprang.

Guntheria Megapotaamica, Sprang.

l.c.; Schlecht. in Linnaea, 11. p. 4.

Polypsteris Brasiliensis, Less. in Linnaea,
6. p. 518

Cercostylis Brasiliensis, Less. Syn.
Compos. l.c.; Dc. l.c. 4 7, p. 293.

Var. β . Scabiosoides: foliis pinnati-
partitis ~~nunc vel sub nunc~~
parce bipinnatifidis.

Cephalophora scabiosoides, Don
in Herb. Hook.

Cercostylis scabiosoides, Arn.
in Dc. Prodr. 7. p. 293 & Hook.
Journ. Bot. 3. p. 322.

Hub. Plains of the Rio Negro,
North Patagonia.

The specimens in the present collection ^{mostly} ~~all~~ bear pinnately parted leaves; but among those of Gillies, Tuckie, &c. all grades occur from entire leaves, of variable breadth, to incised, subpinnatifid, ~~and~~ ^{or} bipinnately parted. Sprengel's name for the genus, founded like Lessing's upon Sellow's specimens, is the earlier by several years, and nothing stands in the way of its restoration. The genus is the representative, ~~on~~ the plains of Buenos Ayres, &c. of Gaillardia and Agassiria in the counterpart region of North America; and the three genera are very closely related. In the style ^{Gnaphthoria} ~~Oerostylis~~ is intermediate between these two genera; from both it recedes in its want of rays;

from Gaillardia also in the villous hairs covering the achenia instead of forming an involuclate envelope.

Plate Guntheria Megapotaunica.

A. Portion of the entire-leaved form; Col. Buenos Ayres, Lieut. Macrae, U.S.A. B. Var. ^{scabrosoides} ~~scabra~~ Fig. 1. Involucre and receptacle, 2. A flower, 3. Corolla and stamens displayed, 4. A stamen, 5. Style, 6. A palea of the pappus. The details variously magnified.

Bahia, Lag., Db.

1. Bahia ambrosioides, Lag.

Bahia ambrosioides, Lag. Mr. Gen.
Spec. p. 30; Less. Syn. p. 238;
Db. Prodr. 5. p. 627 (Gray, Pl. Hort.,
p. 99).

Stylisia ambrosioides, Nutt. in
Trans. Amer. Phil. Soc. (n. ser.),
p. 377.

Hab. Chili, common in the
vicinity of Valparaiso; collected first
by Dombey.

Villanova, Lag.

1. Villanova dissecta, Db.

Hab. Obrajillo, Peru.

This is probably Lagasca's N.

alternifolia, but all the lower leaves are opposite. It is doubtless Hooker's Muxia dissecta, but both ~~ray and disk form~~ the flowers both of the ray and the disk are more than five. The heads are larger and more pedunculate than in V. oppositifolia. The plant essentially a rayless Bahia.

Cephalophora, var.

1. Cephalophora glauca, var.

Hab. Chili, in the vicinity of Valparaiso.

This, the original, is apparently the sole species of the genus, Actinella being a distinct genus, and

C. aromatica, Schrad., with probably
C. plantaginifolia, DC. being merely
C. glauca. The size of the head
is extremely variable.

Galinsoga, Ruiz & Pav.

1. Galinsoga parviflora, Cav.

Stat. Chile, near Valparaiso.

To this species, as already intimated
(Benth. Bot. Voy. Sulph. p. 120; Gray,
Pl. Fendl. p. 104, & Pl. Wright, 2. p. 98)
belongs DeCandolle's Nargaria baracasana: also Schaffner's no. 249, from
Mexico, referred by Schultze to G.
(Wiborgia) urticefolia.

2. Galinsoga uticefolia, Benth.

Niborgia uticefolia, H. B. K.

M. Gen. & Spec. 4, p. 257, t.
389.

Sabazia? uticefolia, DC. Prodr.

5, p. 497.

Galinsoga ^(Nargaria) hispida, Benth. Bot.
Voy. Sulph. p. 119, from a
papposa.

G. uticefolia, Benth. in Erst,
Compos. Centro Amer. ^{p. 38,} no. 156;
from a epapposa.

Itab. Peru, near Obrajillo.

With mere rudiments of pappus, thus
combining ~~G.~~ G. hispida with G. uti-
cefolia into one species, which varies
in the manner of G. parviflora.

Also, a dwarf state, without any
pappus, near Lima.

Raillardia, Gandich.

Char. auct. Capitulum 4-45-
florum, homogamum. Involu-
crum cylindricum, exquisite uni-
seriale, e squamis 4-14 fere
valvatum conniventibus saepius-
que leviter coadunatis, Recep-
tamentum convexum seu conicum,
nudum, pubescens. Flores et
achenia Dubautia. Pappus
uniserialis, setis 18-20 rigida-
tis plumosis. - Frutices vel
arbuscula Sandwicensis, con-
fertifolia; foliis ~~coriaceis~~ oppos-
itis ternato-verticillatis rariusve
alternis rigidis uni-pluri-
nerviis; ramis junioribus plerum-
que hirsutis; capitulis panicula-
tis; floribus albidis vel luteis?

Raillardia, Gandich, Bot. Voy. Frey
p. 469, t. 83; DC. Prodr. b. p. 440.

Notwithstanding the filiform
rays of the pappus, the relation-
ship of this genus is manifestly
with Dubautia among the Stele-
nicæ; from which, indeed, it differs
chiefly in the strictly uniserial
involucre with the scales almost
exactly valvate and connivent, if
not cohering, into a cylindrical
~~or campanulate~~ cylindraceous cup,
instead of partially involving the
subtended flowers; in the naked
instead of paleaceous receptacle;
and in the filiform and truly
plumose setæ of the pappus.
The new species of the present collection
with nerved leaves strengthen this
affinity. Both of ~~this most~~
these striking and most character-
istic ~~genera~~ Sandwichian genera
contain many-flowered as well

as few-flowered species. The present collection extends the three described species of Raillardia to nine, and ~~there~~ there are indications that still others will reward the search of future explorers of the elevated region (between 6000 and 11,000 feet) which they principally inhabit. ~~Some of the~~ ^{most} ~~species~~ ^{better-known} ~~especially R.~~ ~~ciliolata, linearis, and Menziesii~~ are very variable, as are so many of the characteristic plants of these islands. The known species may be arranged thus:

~~A. Nervosa: folia penninervia retic-~~
~~ulata, opposita, dilatata~~

1. Villosa, ^{-reticulata} with dilated and plane
feather-veined and reticulated leaves,
all opposite, the pairs distant,
the heads very numerous and
few-flowered. R. latifolia.

2. Uninervis; with narrow, rigid
one-nerved leaves, destitute of
veins, ~~sometimes~~ rarely showing
traces of lateral nerves; -
Alternate, and their margins revolute,
the cauline ones recurved, those
of the flowering shoots few and
scattered. R. scabra.

Terminately-verticillate or opposite, and
crowded on the branches;

Plane, or the margins slightly
revolute, reflexed-spreading. R. laxiflora.
Carinate or convex below and
concave or canaliculate above,
erectish or appressed, ^{stem imbricated} R. ciliolata.

3. Nervosa; with plane (or somewhat concave) linear-lanceolate, elliptical or ovate, opposite or ternately verticillate crowded, 3-11-nerved leaves.

Leaves narrow, lax and spreading, 3-5-nerved, attenuate at the base; heads 4-12-flowered. R. linearis.

Leaves broader, closely sessile or partly clasping, crowded:

3-5-nerved; heads 7-15-flowered. R. Menziesii.

7-11-nerved, ^{glandular,} ovate-lanceolate, acute:

heads 10-20-flowered, R. platyphylla.

3-5-nerved, glandular, elliptical-oblong, very obtuse; heads 25-45-flowered. R. arborea.

Obscurely 3-5-nerved, oblong-lanceolate, somewhat imbricated and concave; heads 12-20-flowered. R. struthioloides.

1. Raillardia latifolia, Sp. nov. (Tab.

R. foliis ^{oppositis planis} ~~oblongis~~ amptis ^{oblongis} ~~subse-~~
~~tiolatis~~ penniveniis reticulato-
venulosis subpetiolatis disti-
tis ramisque elongatis patenti-
bus glaberrimis; Capitulis in
panicula composita ^{nuda} effusa
numerossimis quadri- (vari-
us quinque-) floris.

Tab. Mountains of Kanai,
Sandwich Islands.

"A rambling shrub," with
long and virgate, glabrous and
smooth branches; the internodes
from 3 to 5 inches long. Leaves
all opposite, plane, 3 or 4 inches
in length, an inch or an inch and
a half broad, oblong, inclining to =

ovoid, spatulate or obovate, rather
acute ^{at both ends, quite entire,} thinly coriaceous, per-
fectly glabrous and somewhat
lucid, lightly feather-veined from
a rather strong midrib, and
the copious veinlets reticulated
on both surfaces; the upper
leaves reduced to bracts. Pan-
icles from the upper axils and
terminal, forming a compound
lax thyrsus of very numerous
small heads; its slender branches,
bractlets, pedicels (mostly shorter
than the heads) and involucre
cinereous-pubescent. Involucre
barely 3 lines long, clavate-cylin-
dric; ^{scales 4 or 5,} the ^{concurrent} and lightly
coherent to near the summit,
a little shorter than the developed
flowers. Receptacle, flowers,
achenes, &c. as in the genus

generally; in which this most distinct species is very remarkable on account of its ample, dilated, feather-veined and reticulated, distant leaves.

Plate Raillandia latifolia. Fig. 1. A capitulum, with bract and bractlet, enlarged. 2. Inside view of the involucre laid open. 3. Receptacle. 4. A flower. 5. An anther. b. Summit of the style. Various magnified.

2. Raillardia scabra, Db. (Tab.)

R. humilis; caulibus floridis ($\frac{1}{2}$ -
2-pedalibus) gracilibus fere herba-
~~ceis~~ superne parce foliatis fere
herbaceis e basi puticosa ra-
mosa decumbente; foliis plenis-
que alternis linearibus uniner-
viis supra vel undique hispidu-
lo-scabris marginibus revolutis
hauri raro denticul parce
dentatis, inferioribus confertissi-
mis reflexis; capitulis plurimis
paniculato-corymbosis 5-7-floris.

Raillardia scabra, Db. Prodr. 6.
p. 441.

Var. β . hispidula; gracilior; foliis
anguste linearibus utrinque
hispidulis.

Var. γ , leiophylla: foliis anguste
linearibus lanceolatis vel supra
obtusis marginibusque hispid-
ulo-scalis. (Tab. .)

Hab. Hawaii, Sandwich Islands,
where it was first collected by Menzies;
frequent on the lava plains, at
between 3000 and 5000 feet elevation,
and in the environs of the ~~Great~~
Great Crater Lupa Pele. Var. β ;
District of Kilauea, ~~Hawaii~~ γ . Environs
of the Great Crater, and that of
East Maui.

A well marked species, of which
the two varieties indicated are slender
forms, the one with more asperate,
the other with smoother leaves,
connecting forms abound in the
present and in Koenig's collections.
It is known by its habit, its naked
and polycapitate corymbose panicle.

icle, and by the narrow leaves being almost all of them alternate, and one-nerved, with ^{more or less} revolute margins, which are sometimes sparingly and sharply toothed. Occasionally indications of a pair of lateral nerves appear on the under surface, but there are no visible veins. The ~~midrib~~ costa, as in the related species, is impressed on the upper, and prominent on the lower surface. The cauline leaves are soon recurved or reflexed; they are from 9 to 18 lines long in length, and from one to $2\frac{1}{2}$ lines in width; ^{the uppermost sparse, shorter, and gradually reduced to bracts.} Pedicels 2 to 7 lines long.

Involute ~~at~~ 3 lines long, of 5 or 6 narrow and soon separating scales, pubescent or nearly glabrous externally. Achene tapering at the base, but not properly stipitate.

Plate

Raillardia

Scabra, var. leiophylla, Fig. 1.
A ^{seen from above.} leaf, enlarged, ^{2. Lower surface and apiculus of the same.} ~~(leaf of a Scabra)~~ ^{3. 4. Similar views of}
~~a leaf of Scabra~~ ^{suberos form.} 5. A head. 6. A
flower. 7. Style. The details
magnified.

3. Raillardia laxiflora. DC.

R. ramis floridis fruticosis saepe
foliosissimis; foliis latiusculis
linearibus seu lanceolatis
planis (vel margine ~~for~~ sca-
mum denticulato) crassis
uninervis supra
lucidis scaberrulis seu loriga-
tis, ^{parvisque series reflexis,} plenisque terminato-vorticil-
latis, superioribus saepe alternis;
panicula subsimplici laxa;

capitulis plerumque longe pedi-
cellatis 6-13-floris.

Raillardia laxiflora, D.C. Prodr.
b. p. 441.

Stat. Hawaii; on the lava-
plains near the great crater.

This species is intermediate
between the foregoing and the
following;—two species which no
one would ^{willingly} venture to combine.
From R. scabra it differs in
its more ^{and far more} woody flowering stems,
on which most of the leaves are
in ~~the~~ threes, its simpler panicle
and rather larger heads. The leaves
are proportionally broader (6-12 lines long
and 2-2½ lines broad), thicker, and with
the margins ~~not~~ obscurely if at all
revolute. On some dwarf specimens

The stem are only sparsely leafy
toward the panicle, but they are
commonly crowded up to its com-
mencement. From R. ciliolata
it is distinguished by the plane,
reflexed-spreading leaves, with
barely scabrous margins, more
open panicle, slender pedicels,
&c. Yet there are some ambiguous
specimens.

H. Raillardia ^{l.c. (Tab.)} ciliolata, St.

R. ramosissima; ramis usque
ad apicem confertissime foliosis
lignosis; foliis lanceolatis lineari-
oblongis vel obtuse lanceolato-sub-

ulatis crassis uninnerviis infra
convexis seu carinatis supra
concavis vel marginibus (semper
hispidulo-ciliatis scabro-ciliola-
tisve) leviter involutis lucidis
oppositis vel ternis ^{plurisque} ~~Raphis~~ erectis
seu erectiusculis et ramorum
sterilium imbricatis; capitulis
paucis subracemosis 5-12-floris.
— Variat foliis vermicoro-lucidis
vel opacis, laevigatis scaberrulis vel
hispidulis, et, in extremis subse-
quentibus.

Var. β . laxifolia; foliis patentibus
subplanis minus crebris.

Var. γ . juniperoides; foliis minori-
bus involuto-canaliculatis
quasi acerosis confertissimis
imbricatis; capitulis suboli-
tariis.

Itab. Hawaii; abundant on the high lava-plains, &c. at and above 8000 feet; collected first by Minries.

A low, much-branched, rigid-shrub, running into many varieties, of which the two extremes are noted above. Between these Macrae's specimens, upon which DeCandolle characterized the species, is fairly intermediate. The leaves vary from approximate to ~~dens~~ closely crowded, from somewhat spreading to erect and imbricated, from ternately, verticillate to opposite, from flattish to strongly canaliculate - concave above and carinate - convex below, ^{hardly more than} from a quarter of an inch (in var. γ) to nearly an inch in length. In a few specimens, ~~also~~ only, especially in var. β , which approaches R.

Laxiflora, DC., the leaves are widely spreading. They are all veinless and nerveless, except the midrib, ^{very rigid, mostly} ~~and~~ ^{obtusely} ciliate margins more or less involute, never revolute, involucre 3 or 4 lines long, generally containing 6 or 7 flowers. Achenia minutely and sparsely hairy or glabrate.

Plate

Raillardia ciliolata.

A. Nearly the originally-described form, ^{and} with a sterile branch having the leaves more imbricated. Fig. 1.

1. A leaf seen from below. 2. ~~A~~ Portion of same seen from above. B. Var. *laxifolia*. 3. A leaf, lower surface. 4. Upper surface of the same. 5. A head. 6. A flower. 7. A stamen. 8. Style. C. Var. *juniperoides*. 9. Leaf ^{divided,} the upper surface. 10. Style. 11. Achenium and pappus. The details variously magnified.

5. Raillardia linearis, Gandich.

R. ramis laxis patentibus; foliis
confertiusculis, ^{teretibus, rariusve oppositis} laxe patentibus
lanceolatis linearibusve 3-5 nervi-
vis planis, nervis obsolete
denticulatis, ^{utrinque vel basi angustatis} glabris vel sericeo-pu-
berulis; paniculis compositis poly-
cephalis nudis; capitulis cymulosis
so-fasciculatis 3-7- (raro 8-12-)
floris.

Raillardia linearis, Gandich, Bot.
Noy. Freyc. p. 469, t. 83; DC. l.c.

Stat. Sandwich Islands; on
the Kaala Mountains, Oahu. Also
on Hawaii, on ^{Mouna Kea,} Mouna Loa and
near the Great Crater, and on the
banks of the crater of East Maui.

Shrub about 6 feet high;
the branches slender. Leaves less
rigid than in any of the foregoing
species, plane, or with the margins
when dry ~~a little~~ slightly
revolute, lightly 3-nerved or some-
times 5-nerved, from 1 to 3 inches
long and from 2 to 4 lines broad,
acute or acutish, tapering to the
base, the larger ones appearing
somewhat petioled, generally
^{the pubescence when present, fine, and not glabrous.}
whorled in threes, ^{the} panicle ^{the} yr=
oid-corymbose at the summit of
the branches; the small heads
usually sessile in threes at the ~~upper~~
extremity of the peduncles or their di-
visions; bracts very small. Flowers
in the specimens from Oahu, and
part of those from Hawaii from 3 to
5 in the head; in ^{one} ~~others from~~ other
Hawaiian specimen from 6 to 10, and
in the specimen from Maui, even

12, the heads correspondingly
larger, ~~fewer~~, less numerous, and
subsultary on the peduncles.

Gandichand's plate represents
this species very well, in one of the
narrower-leaved forms. ~~It is~~
~~among the narrow species, the~~
~~one~~

b. Raillardia Menziesii, Sp. Nov.

R. ramis rigidis usque ad apicem
conferte foliosissimis; foliis ternis
vel oppositis ellipticis seu lanceo-
lato-oblongis arcte sessilibus
planis trinerviis (seu latioribus
5-nerviis) scabro-hirsutulis nune
lavigatis; panícula subsim-
plici; capitulis pedicellatis
7-15-floris. — Variat foliis laxi-
usculis subpatentibus seu
confertis fere imbricatis, oblongo-
lanceolatis seu ovato-ellipticis
(latioribus quandoque rariter
denticulatis), opacis hirsutulis
vel nitidis glabratiss, margini-
bus hispidulo-ciliatis.

Hab. Sandwich Islands; banks
of the crater of East Mani (broad
leaved forms, one of them ^(will) answering

to specimens collected by Menzies
on (Hawaii); Moma Kea, H. Ha-
waii, ^{the} narrow-leaved forms.

Shrub 2 to 6 feet high, rigid.
Leaves from 10 to 18 lines long, and
from $3\frac{1}{2}$ to 9 lines broad, plane, in
the broader forms ^{almost exactly} elliptical and
obtuse ~~at both~~ or rounded at
both ends, or the apex barely apic-
ulate, the narrower ones less
blunt, rigid, even the broadest
often only three-nerved, ^{and} the minor
veinless. Panicle rather small,
open; pedicels 3 to 6 lines long.
Involucre of 5 to 8 scales, exter-
nally slightly or densely pubes-
cent.

~~While the narrow-leaved forms
approach *R. linearis*, the broader
ones are closely~~

The forms which I must
now consider as all belonging to
one species fill the wide inter-
val between R. linearis and
the following striking new spe-
cies; ~~the~~ ^{specimens} ~~some of the~~ narrow-
leaved ~~and~~ ^{with} fewer flowered heads
approaching R. linearis, while
the broader ones are closely related
to R. platyphylla and ^{R. arborea} ~~viscosa~~.

~~γ. Raillardia platyphylla, sp. nov.~~
~~R. ramis validis foliosissimis;~~
~~foliis ~~ternis vel~~ oppositis ovato-~~
~~lanceolatis semianaplexicantibus~~

7. Raillardia platyphylla. Sp. Nov.

R. ramis validis conferte foliosis-
simis; foliis oppositis lanceolatis,
ovatis e basi semiamplexicauli
ad apicem ^{perisperm} ~~atque~~ angustatis
subacutis rariter denticulatis
planis 7-11-nerviis undique
scaberrimis, junioribus glandu-
loso-viscosis; panicula nuda;
capitulis 10-20-floris, - Variat
foliis angustioribus - ~~terminis~~ oblongo-
lanceolatis ~~atque~~ terminis.

Hab. Maui, Sandwich Islands,
"on the summit of the dividing
ridge of the ~~crater~~ crater-
like cleft of Mouna Haleakala,
at the elevation of about 7500
feet."

Apparently a rather large
shrub; the leaves 2 or 3 inches

inches long, and fully an inch wide at the broad ~~base~~, thence tapering gradually to the apex, and conspicuously 9-11 nerved; or in ^{one specimen} (a sterile branch), where they are in threes, only 6 to 9 lines wide at the base and less tapering, ^{blunter, and} with 7 to 9 nerves; the surface very scabrous to the touch from minute papillae; the ~~young~~ nascent leaves glutinous from a fine glandular pubescence. Young branches and the inflorescence minute and glandular, as also the exterior of the involucre. ~~Very few heads remain~~ The flowers had nearly all fallen from the specimens; but the involucre appear to be about the ~~length &~~ size of those of the following nearly allied species, except that they are narrower and the flowers much fewer.

8. Raillandia arborea, Sp. Nov. (Tab. .)

R. caule arboreo; ramis validis con-
natis - ferte foliosis; foliis op-
positis ternisve elliptico - seu
elongato - oblongis utrinque ob-
tusissimis acute sessilibus planis
3-5-nerviis glanduloso - scabridis,
junioribus viscoso - pubescentibus;
panicula ² ~~simplici~~ basi foliosa cum
involucro ~~typo~~ 9-14-phylo 25-45-
florescens nrisutis et glanduloso-visco-
sis.

Hab. Hawaii; "in the high pas-
toral District of Mouna Kea: scat-
tered trees in company with those
of Edwardsia."

"A small tree, twenty feet high,
with the trunk a foot in diameter",
according to Dr Pickering. Branchlets,

inflorescence, and all young parts
hirsute (as is common in the genus)
and also glandular-pubescent. Leaves
green, not very thick, plane, rather
spreading, $1\frac{1}{2}$ to 2 inches long, 6 to 9
lines wide, all entire, more glandu-
lar but less scabrous than those
of R. platyphylla, the base not
dilated, sessile by a broad but hardly
clasp ing insertion. Heads rather
few or numerous in a somewhat
obovoid panicle, pedunculate, and,
when the inflorescence is compound,
pedicelled. Involucre $4\frac{1}{2}$ lines long,
very densely glandular-pubescent, ~~the~~
campanulate, usually of 12 or 13
~~scales~~ lightly adherent scales, and
containing a larger number of flow-
ers than any any other species.
Receptacle conical, obtuse, lightly
alveolate, pubescent. Ovary sparsely

N.W. (Tab.)

9. Raillardia struthioloides, Sp. 1

R. arborescens; foliis terminis secus
ramos imbricato-confer-tis ob-
longo- seu elliptico-lanceolatis
subacutis arcte sessilibus leviter
concavis sub-3-5-nerviis cinereo-
hispidulis vel scabris^{idis}, junioribus
hirsuto-ciliatis; panicula seu
racemo simplici; involucro 6-9-
phylo 12-20-floro.

Tab. Hawaii; on Mouna Kea
with the preceding, extending to the
elevation of 11,500 feet.

A shrub, or "at the elevation
of 9500 feet, sometimes a tree, twenty
feet high, with the trunk nine
inches in diameter, the branches
overhanging." Leaves, especially
on sterile branchlets, very closely

crowded or imbricated, erect or
at length erect-spreading, $1\frac{1}{2}$ to 2
inches long, 4 to 7 lines wide,
rigid, more or less concave, at
least when young and in the dried
state, pale and opaque, or sometimes
rather lucid; the midrib not
prominent, the other nerves mostly
obscure or obsolete on the lower, ~~sur-~~
~~face~~, but more apparent on the
~~upper~~ upper surface, in all 3
or 5, the ~~lateral~~ ~~pair~~ lateral pair
indistinct. Branches and inflores-
cence villous or hirsute-pubescent,
not glandular. Heads on rather
slender, at length recurved pedicels,
several, in a ~~small~~ raceme or
simple panicle. Involucre ^{pubescent,} about
the length of that of the preceding
species, but narrower, and much
fewer-flowered. Receptacle small,

obtusely conical, pubescent.
Achenia sparingly pilose or
glabrate.

A striking species, tending
in ~~Plate~~ some respects to ally
R. ciliolata with the plurinerved
species.

Plate

Raillardia

struthioides; a flowering branch.

Fig. 1. Tip of a sterile branch, with
younger leaves. 2. View of the upper
surface of a leaf, showing the nerves,
ts. 3. A flower magnified. 4. Ovary
and stamens displayed. 5. Style
more magnified. 6. Achenium and
pappus magnified.

Hirsute. Achenia glabrate, strongly
5-ribbed.

Plate

Raillardia arborea:

a flowering branchlet, Fig. 1. A
leaf with the glandular scabrosity
~~represented~~ shown. 2. A flower en-
larged. 3. The corolla and stamens
displayed. 4. A stamen more mag-
nified. 5. Summit of the style more
magnified. 6. Receptacle magnified.
7. Achenium and pappus. 8. Ache-
nium ~~transverse~~ transversely divi-
ded. 9. A seta of the pappus more
magnified.

Dubautia, Gaudich.

Char. auct. Capitulum 7-25-
florum, Monogamum, Involucrum
subuni^{fructiferum lacuna}seriale; squamis 8-10 cym-
biformibus floris totidem amplex-
antibus. Receptaculum paleis
squamis involucri similibus ~~ful-~~
floris nonnullos aut omnes interi-
ores fulcrantibus ornatum. Corol-
la tubulosa, tubo cylindrico post
anthesin ^{sepe} recurvo, limbo 5-fido,
lobis revolutis. ^(purpurea) Antherae, max
exsertae, ecandatae; filamenta sub
apice articulata. Styli rami
revoluti, cono ^{complanato} acuto, hispidulo ter-
minati. Achena 4-5-gona deorsum
attenuata, hispida. Pappus palea-
ceus, uniserialis; paleis 15-20 seti-
formi-subulatis lanceolatisve firm-
briolatis. - Frutices Sandwicensis,

2

plantaginifolii; ramis teres-
tibus, nervis hirsutis, vetus-
tis cicatricibus ^{crebris} ^{orbatis} annulatis; fo-
liis oppositis confertis (rigidis)
basi angustata amplexicaulis
chartaceo-coriaceis ^{denticulatis} nervosis; capit-
ulis fasciculatis paniculatis, flori-
bus flavis vel purpureiscentibus.

Subantia, Gandich. Bot. Voy. Freyc.
p. 468, t. 84; Less in Linnaea,
b, p. 163 ^{& Syn. p. 247} Hook. & Arn. Bot.
Beech. Voy. p. 88; DC. Prodr.
5, p. 680; Gray in Proceed. Amer. Acad.
5, p. .

The best ^{of the former} published descriptions
is that of Lessing, who rightly
ascribed to D. plantaginea a
couple of paleae on the receptacle.
These, although overlooked by Hooker
and Arnott, and therefore, perhaps,

omitted by DeCandolle and Endlicher,
are generally, if not always, present
whenever the flowers are more
numerous than the scales of the
involucre, subtending those ^{interior} flowers.
In a new species of the present
collection, with many more flowers
in the capitulum, each flower is
subtended and its achenium em-
braced by ~~a scale~~, such a palea.
The flowers in all are apparently
pale yellow turning orange or
purple with age.

1. Subantia plantaginea, ^{Gaudich. l.c.}

9. foliis glabris glabrisve elonga-
to-lanceolatis sensim acumina-
tis basi modice angustatis
plurinerviis; capitulis parvis 7-
10-floris in ~~racemis~~ numerosis-
simis in ramos divergentes
folioso-bracteatos paniculae thyr-
soides magnae congestis;
receptaculi parvi paleis 1-3;
corollae tubo gracili limbo subito
saepe abrupte campanulato duplo
longiore pappi ^{oxydi} ~~paleas~~ paleas
~~aristiformes~~ ~~subulato~~ setiformes barbellatas
subsuperante.

Ital. Sandwich Islands; on
the mountains of Oahu, where it
was collected by Gaudichaud, Cham-
isso, &c.; but Penny has gathered it
also on ~~Oahu~~ Hawaii.

The leaves, as Dr. Pickering remarks, strikingly resemble those of ~~Plant~~ the shrubby Plantago of the same Island (P. princeps); they vary from 4 to 8 inches in length, and from 6 to 15 lines in width, their denticulations minute, the surface dull. The heads do not exceed four lines in length. The smooth tube of the corolla elongating with age and usually curving outward equals or exceeds the pappus. In Gaudichand's original specimens the ~~panicle~~ inflorescence is undeveloped, so that the published figure gives no idea of the ample thyrsoid compound panicle, with divaricate branches, the lower branches often five or six inches ^{long} ~~in length~~, and naked at the base for half that length, these and their ^{crowded} ramifications subtended by leafy bracts. Moreover the leaves ~~exhibit~~ taper at the base far more than in Gaudichand's plate.

2. Dubautia laevigata, Sp. Nov.

D. foliis oblongo-lanceolatis terorum
longe attenuatis quasi petiolatis
ultra medium acute serratis
laxe inconspicue plurinerviis nitidis
rarnisque glaberrimis; panicula
thyrsiformi pedunculata nuda;
receptaculo parvo.

Hab. Sandwich Islands, in the
mountains of Karai.

A single incomplete specimen
only was collected, with 'withered in-
flrescence, from which the flowers have
long fallen. It may prove to be
only a variety of the foregoing species;
but apparently the stem or branch
is less woody, the foliage less com-
pacted, and the small panicle
long peduncled and naked. This is
softly pubescent, while the stem below

and the leaves, are very glabrous. The latter are lucid, especially their upper surface, rather shorter but broader than those of D. Plantaginea, their nerves similar but delicate and inconspicuous, scarcely stronger than the intermediate reticulated veinlets; the narrowed base more petio-
liform. The heads, as appears from the persistent scales of the involucre, are hardly larger than those of the foregoing species, the receptacle sim-
ilar.

(Tab.)
3. Dubantia laxa, Hook. & Arn.)

D. foliis glabris vel strigoso-
hispidis oblongo-lanceolatis
variusve ovali-^{sen gynecato-}oblongis antice
agute serrulatis acuminatis des-
sum longe attenuatis laxe nervatis;

capitulis parvulis ^{(cymosis}
~~brevem digestis~~ ^{in cymosis} 10-15-floris, floribus
interioribus sepiissime paleatis;
corolla pappi (saepè rufi)
paleas subulato-aristiformes
~~serrato-fimbriolatas~~ ^{vix super-} ~~add. glandulosas~~, tubo
glanduloso,

Dubautia laxa, Hook. & Arn. Bot. Beech.
Voy. p. 87.

Itab. Oahu, Sandwich Islands,
on the mountains behind Honolulu.
The broader-leaved and strigose-hispid
form was also gathered on Lanai
by Kemy.

This species is not well named,
the inflorescence being less lax than
that of D. plantaginea in fully
developed specimens. The inflores-
cence is quite different from that
of the above-named species, being a

short, rather simple or sparingly
compound, corymbose cyme; The
heads, ~~are~~ seldom numerous, are
solitary ^{mostly} or in threes at the summit
of the peduncles; they are sometimes
scarcely larger than those of D.
plantaginifolia, but ~~are~~ sometimes
twice as large with more numer-
ous flowers, ~~as in the former~~
~~figured~~ ^{(and indeed they often appear} as if two or three heads
were ~~merged~~ confluent into
one. All, or nearly all the flowers
are subtended, ^{the asperities} and partially em-
braced, either by ~~a~~ a scale of
the involucre or by a ^{similar} receptacular
palea. The corolla scarcely if
at all exceeds the pappus in length,
its tube being much shorter than
that of D. plantaginifolia, and also
more or less glandular instead of
^{and the ~~floral~~ throat is not so suddenly amplified} smooth and naked. The pappus,
which generally reddish or purple,

Consists of simple, but less barbellate
aristiform paleae, their surfaces more
or less pilose, but the ~~perianth~~ mar-
gins rather serrate-fimbriate.
The leaves are very variable in form,
but generally shorter and almost
always proportionally broader than
in S. plantaginacea; they vary from
 $1\frac{1}{2}$ to 5 inches in length, and from
half an inch to an inch and a half
in width; rarely glabrous, they
are commonly hispid with short
appressed ^{on} histles, at least the lower
surface, sometimes strikingly on both
sides, especially those of young shoots.

Plate B. Subantia laxa, ^(Fig 1.) A
branchlet of a form with ^{rather few and} larger capitula,
of the natural size. 2. Receptacle
with one remaining interior flower and its
subtending chaff, and two marginal flowers
with their subtending involueral scales, magnified.
3. One of the narrow paleae of the pappus, more mag-
nified.

4. Subantia paleata, sp. nov. Tab.

D. foliis strigoso-hispidulis oblongo-lanceolatis utrinque parum attenuatis ^{antice subdenticulatis} ~~plurimerviis~~; capitulis multi-(12-30)-floris; corymbosis paucis magnisculis; receptaculo elevato ~~indigne~~ paleis ^{plurimis} ₁ crusto; corollae tubo puppi paleas lanceolatas margine erosas ~~denticulatas~~ superante, fance vix ampliata, limbo 5-partito.

Hab. On the Mountains of Kanaï, one of the Sandwich Islands.

Base of the stem unknown. Branches very minute, as also the inflorescence, &c. Leaves $1\frac{1}{2}$ to 3

inches long, from 5 to 8 lines broad,
not acuminate nor much nar-
rowed ~~down~~ at the connate-clas-
ping base, minutely and densely
hispid on both sides with short
strigose hairs. Peduncles terminal
and from the uppermost axils,
short, bearing from 3 to 7 or 8
corymbose heads, which are larger
than in any other species, being 5
or 6 lines long; the scales of the
involucre broader, externally stri-
gose-cinereous; the flowers ~~gener-~~
ally numerous, from 20 to 25 or even
30, but in one small specimen
only 12 to 14. ~~The~~ receptacle
in the many-flowered heads is much
elevated but ^{and} narrower, each flower
is subtended by a palea similar to
an involucre scale. The tube of
the corolla is elongated beyond the
pappus, and after anthesis cur-

ved outwards, as in D. plantaginea,
but the limb is more deeply
cleft, and the throat scarcely
at all dilated. Anthers, style,
and achenia similar. But the
pappus consists of lanceolate or
oblong-^{lanceolate,} ~~linear~~, pointed, not aristiform,
palea, proportionally short, ~~with~~
and with merely crose-denticulate
or somewhat lacinate
margins. — The species is a most
distinct and remarkable one.

Plate X. Subantia pa-
leata: branch, of the size of nature,
Fig. 1. Section of the receptacle, ~~leaving~~^{with}
~~two marginal flowers subtended by the involu-~~
~~cral scales and an interior one with its~~
~~subtending palea.~~ with 3 flowers
remaining and the subtending scales and palea.
2. One of the palea displayed. 3. A flower. 4.
A stamen. 5. The style. 6. A palea of the
pappus. The details variously magni-
fied.

Wilkesia, W. G.

Capitulum monogamum, multiflorum. Involucrum campanulatum, ~~14~~¹⁴-28-dentatum, ~~et~~ hinc inde subincisum, herbaceo-membraceum, dentibus villosociliatis. Receptaculum convexum, nudum, glabrum. Flores hermaphroditi, conformes. Corolla tubulosa, glabra, e tubo gracili cyathiformes, lobis 5 brevibus recurvis. Antherae max exsertae, e caudatae. Styli rami involuti, cono hispidulo complanato apice subulato superati. Achenia elongata, compresso-quadrangulata, ad angulos ^{sex} costas hispidula. Pappus paleaceus, persistens, uniserialis, paleis 8 lanceolato-subulatis nris.

(Sandwicensis,
ciliatis. — Arbuscula?) (Yucca-
formis; ~~orgy~~ caule simplici
orgyali, seu biorgyali, foliis
linearibus ~~anisiformi~~ gladiatis
vel superioribus lan-
ceolatis coriaceis crebre nervu-
losis proter margins tomen-
toso-ciliatos glabris ^(nascentibus) ~~per~~
~~seriatis~~) ~~bascos~~ in verticillos propin-
quos polyphyllis congestis
et per bascos pl. m. coadunatis,
pedunculis gracilibus glandu-
losis 1-5-cephalis ex axillis
fol. suppr. ortis paniculam
amplam laxam efficientibus;
capitulis fructiferis post an-
thesin mutanti bus; ~~fructibus at~~
~~videtur per~~

1. Wilkesia gymnoxiphium. Sp. Nr.
(Tab. .)

(Vide Gray in Proceed. Amer. Ass.
Sci., ann. 1849, p. 397, & in Pro-
ceed. Amer. Acad. 2, p. 150, & 5, p.)

Itab, Kauai, one of the ~~Sand~~
Sandwich Islands, "along the lee-
ward verge of its tabular sum-
mit, at the elevation of about
3700 feet."

The simple stem of this
very striking arborescent Com-
posita, according to Dr. Pickering's
memorandum, is "simple, from
6 to 14 feet high; the leaves not
crowded (as in Argyroxiphium), dis-
tinctly verticillate, or even united
for an inch or more, and smooth,
with a white woolly margin". How
far the stem is ligneous is not
recorded. The flowering summit is
herbaceous or nearly so, with a
large pith. The lower leaves
preserved are a foot long, only
4 or 5 lines wide, apparently ~~summit~~
^{many} ~~rest~~ in the verticil, their bases coal-
escent for two inches. ^{more bract-like} The leaves

in and below the panicle are lanceolate, ~~from 3 to~~ less rigid, from 3 to 5 inches long, 6 to 9 lines wide, from 6 to 12 in a whorl, and more or less united by their bases, the whorls half an inch or an inch apart. Peduncles about 6 inches long, slender, glandular-pubescent, naked to near their summit, where small bracts subtend two or three slender, at length nodding pedicels, bearing each a rather small naked head. Involucres half an inch long, and of somewhat greater breadth, not bracteate, of a thin and rather foliaceous ^{minutely glandular, otherwise} texture, glabrous, except the villous margins of its ^{in fruit at length separating from the base,} teeth or short lobes. Flowers 50 or more, moderately exserted, apparently whitish or flesh-color; their whole general structure that

similar to those of Dubautia
and to the disk-flowers of
Argyroxiphium; the pappus
that of the former; the recepta-
cle as in the latter.

Being one of the most stri-
king as well as botanically re-
markable of the plants discov-
ered ~~in the~~ by the South Pacif-
ic Exploring Expedition, this genus
will very appropriately bear the
name and commemorate the
distinguished scientific services
of the Commander of the Expe-
dition, Capt. Charles Wilkes,
the author of the Narrative of
the voyage, its Meteorology, and
its Hydrography. ~~the~~

Since the characters of Wilkesia
were briefly indicated, in 1849, ~~and~~
~~in the~~ discovery that the palea
which ^(interpose) ~~interpose~~ between the

disk and the ray in Argyroxiphium are gamophyllous, demonstrates the close affinity of this genus with the latter, - from which, indeed, it differs only in the regular paleaceous pappus, and in the entire absence both of ~~the~~ ^{the} ray-flowers and of their subtending bracteole.

Plate Milkesia gym-
naxiphium; flowering summit, of
the size of nature. Fig. 1. Can-
line ^{natural size,} leaves; 2. Vertical section
of a head. 3. Involucre displayed,
4. Receptacle. 5. A flower. 6. Stamens,
7. Summit of pistil. 8. Achermen
and pappus. 9. A palea of the pap-
pus. & The details variously magni-
fied.

Argyroxiphium, DC.

Char. reform. ^(hemisphaericum) Capitulum hetero-
gamum, multiflorum; flori-
bus radii uniserialibus ligu-
latis femineis, disci herma-
phroditis tubulosis. Involu-
cum ~~tot subbiseriale~~ uniseriali, squamis
numerosis (tot quot ligulae)
discum subaequantibus ^{angustis} convolu-
tis achenia radii involventibus.
Receptaculum convexum vel
conicum, inter radium et dis-
cum ^{gerens} ~~seriem~~ paleas uniseriales
gamophyllas, ceterum nudum.
Ligulae breves, plerumque tri-
dentatae. Corollae fl. herm.,
glabra, e tubo gracili sursum
ampliata, 5-dentata. Antherae
scaudatae; filamenta sub apice
articulata. Styli rami lin-

cares, fl. herm. cono complana-
to hispidulo superati. Achenia
elongata, glabra, 4-5-angulata,
angulis prominentibus costae fr-
mitibus, radii incurvae, aut
omnia prater corollam
~~brevissimam~~ ^{brevem} calva, aut disci
pappi ^{persistente} paleis paucis valde
inequalibus subconcretis, super-
ata. — ^{Plantae Martiaceae?} ~~Herbaceae~~ Sandwicensis, in-
signes; ^{tri-sexpedales;} ~~crasse majores~~ ^{argyreae;}
caule ^{simplici} percrasso foliis ^{angustis} ~~linearibus~~
^{pugionibus} ~~crassis~~ formibus rigidissimis
plurimisque sericeo-argenteis
imbricato-confertissimis ~~pluri~~
undique horrente panícula
ampla laxius foliata termi-
nato; pedunculis viscoso-pu-
bescentibus; capitulis mutan-
tibus; floribus ~~prosperscentibus?~~
radii luteis, disci roseo-purpureis.

Argyroxiphium, DC. Prodr. 5,

p. 668, & Mem. Comp. p. 27, t.
8; Hook. & Pl. t. 75; Gray
in ^{Proc. Acad. Sci. 1849, l.c.} ~~Proc.~~ Amer. Acad. 2, p.
159.

The involution of the scales
of the involucre around the ray-
achnia is represented in Hooker's
figure, above cited, but not in de
Candolle's, who however represents these
achnia as incurved. The ~~interp~~
circle of paleae interposed between
these and the disk-flowers was
published by me in the year 1849,
along with the characters of a new
species and of the foregoing, nearly
allied genus, and the ~~very obvious~~ ^{more obvious} affinity
with the Madieae ~~suggests~~ indica-
ted. The union of these marginal
paleae into a cup (which, however,
is fissile with age), as in several
Madieae was noticed later. These

characters, and the want or extreme reduction of the pappus in the ray, are conclusive as to this relationship, with which even the habit is not incongruous. The glandular-glutinous inflorescence, &c. is almost universal in that group, several Californian species of which have appressed-silky radical leaves. These plants, therefore, are the princes of a race (the Madieae) which ~~belong~~ are otherwise restricted to the adjacent coast of the American continent (from Oregon to Chili); and the while Wilkesia - an Argyroxiphium wanting the ray-flowers and their involueral bracts, ~~with the~~ ^{discoid} Dubautia ~~an~~ and a sort of gigantic Lasthonia - and Raillardia - together comprising the characteristic Composite of the Sandwich Islands, have also

only American affinities. Moreover, the two species of the present genus differ from each other in a manner characteristic of their American relatives, namely, ~~as~~ ^(Heterogynne) ~~Lasthenia glabrata~~, from ~~Lasthenia~~ ~~prosp.~~ ~~Burrielia (Baeria) chrysostoma~~, ~~or (Otilomeris) calva~~, in the presence or absence of pappus. See *Planta Wrightiana*, p. 123 for a list of analogous instances, which could be still further extended.

1. Argyroxiphium Sandwicense, DC. (Tab. x)

A. ligulis longiusculis 12-16;
stylis fl. disci ramis breviter
obtusaeque appendiculatis; papp-
achenis disci inaequaliter palea-
co-papposis; receptaculo convexo,

Argyroxiphium Sandwicense,
Dc. l.c.; Hook. l.c.

Argyrophyton Douglasii, Hook.
in Comp. Bot. Mag. 2, p. 163,
sine char.

Hab. Hawaii, on Mouna
Kea and Mouna Roa, at the
elevation of from 6300 to 12000
feet.

Heads ~~rather~~ less than an
inch in diameter. Scales of the
involucre lanceolate, acuminate,
villous externally with ^{and some glandular} viscid hairs.
Ligules 5 or 6 lines long, ^{rose-color or purple} linear-oblong
or somewhat cuneate, sometimes
emarginate, as in our figure, some-
times trifid at the apex, as repre-
sented by Hooker and DeCandolle, ~~but now~~
~~color not recorded, apparently~~
~~rose or purple.~~ Receptacle barely

half an inch broad convex,
glabrous and naked, except at its
margin, where it bears a circle
of about 24 lanceolate paleae
which are united by their edges
to near the summit in to a
membranaceous ^{externally viscos-pubescent,} at length fis-
side cups, ^{which somewhat exceeds the involucre} branches of the style
in the hermaphrodite flowers
narrowly linear, minutely hairy
externally, margined within with
strong stigmatic lines, tipped
with a short and obtuse minutely-
hispid cone. Achenia glabrous,
with four or sometimes five sali-
ently costate angles, about 5 lines
long, ~~the~~ terminated by a short
and coriaceous ^{or corneous} corolla, which
in the ray is truncate, ^{sometimes,} or ~~flat~~
would seem from DeBardolle's ~~also~~
analyses, produced on the poste-
rior side into a strong tooth

or auricle, but in the disk
is extended into a manifest pappus
of four or five or more coriaceous
paleae, more or less coriiform
concreted, and irregular, the
outer side of the ^{crown} ~~leaf~~, or one
or two of the outer paleae being
considerably ^{extended or} elongated. Leaves
dagger-shaped or bayonet-shaped,
8 to 16 inches long, 5 or 6 lines
wide, in some young plants
much smaller and narrower,
very densely silky and brightly
silvery, with a coat of appressed
villous down, a part of which
^{often} wears away or becomes detached
with age, leaving a fine grayish
^{silky} pubescence, or ~~as~~ ^{the} is soon
deciduous from the uppermost
and floral leaves, which ^{green and} are vis-
coso-pubescent, like the peduncles
and ~~the~~ involucre. Stem 2 or

3 inches in diameter, tapering into the panicle, with a large pith, and a thin woody zone; the whole ~~rather~~ herbaceous, rather than fruticose.

Plate B. Vertical section of an involucre and receptacle, showing a ray-flower, its ~~achene~~ ovary involved in the subtending involucreal scale, 2. Similar section, showing the involute scales of the involucre outside of the cup of ~~the~~ gamophyllous palea of the margin of the receptacle. 3. Receptacle, 4. A ray-flower with its involucreal scale, more enlarged, 5. Style from the same. 6. A ~~fix~~ disk-flower. 7. Summit of the style of the same. 8. Acheneum and pappus of a disk flower. 9. Pappus and summit of an acheneum of another disk flower. 10. Acheneum of a ray-flower. — Various magnified.

2. Argyroxiphium macroceph-
alum, Sp. nov. (Tab.)

A. ligulis 20-30 brevibus; stylis
fl. disci ramis cono acuto
superatis; pappo nisi cornu-
la brevissima disciformi
nullo; receptaculo conico.

Argyroxiphium macrocephalum
Gray, in Proceed. Amer. Ass. L.C.
p. 160.

Tab. Maui, on ^{Mouna}~~Mauna~~
Haleakala, "extending from the
elevation of 9000 feet to within
thirty feet of the summit.

In general appearance this
must closely resemble the A.
Sandonense; for so acute an

observer as Dr. Pickering did not distinguish it from the Hawaiian species. But the heads are larger, ^{at least} an inch and a half in diameter; the ligules are considerably more numerous and shorter, only three or four lines in length; the receptacle is conical, its height equalling the breadth of the base; the appendages of the style in the hermaphrodite flowers are like those of Durbanthia and Raillandia, and the pappus in both ~~ray and~~ disk and ray is reduced to a very narrow entire corolla. Otherwise the structure is the same. ^{A partially colored drawing of a ~~recent~~ head of the recent plants makes the rays deep pink, the disk yellow.}

Dr. Pickering mentions another species, on Mouna Haleakala at a less elevation, between 5500 and 9500 feet "with the leaves green and smooth". Of this

only three or four leaves are
in the collection. They are 9
inches long, less than 3 lines wide,
^{and delicately 3-5 nerved}
glabrous beneath, silky - puber-
ulent above and on the margins,
and probably indicate a new species
either of this genus or the preceding.

Plate Argemone
macrocephalum; leaves, and portion
of ^a flowering summit, representing a
few ~~out~~ of the very numerous (50-
100) heads of the panicle, of the nat-
ural size. A distant view of a
whole plant in the back ground,
either of this or the preceding spe-
cies, from a sketch by one of the
artists of the Expedition.

Plate A. Fig. 1. Head
with peduncle and bractial leaves
of A. macrocephalum, ^{of the natural size.} 2. Vertical

section of the receptacle, circle of united pappi, and involucre, 3. A small portion of involucre and united pappi transversely divided. 4. Receptacle. 5. A ray-flower with its involucreal scale. 6. Summit of style of the latter. 7. ~~A stamen.~~ An hermaphrodite flower. 8. A stamen. 9. Summit of ~~its~~ the style of fig. 7. 10. An achenium of the ray. The details variously magnified.

Madia, Molina.

1. Madia pativa, Molina.

Hab. Chili; common around
Valparaiso.

Cotula, Linnaeus, Garten.

1. Cotula coronopifolia, Linnaeus.

Hab. Sydney, New South Wales.

A species now so widely scattered over
the temperate parts of the Southern
hemisphere and some ~~parts~~ portions
of the northern, that it is hard to
guess at its original home. It
is not found in Eastern North America,
but it has been met with in Cali-
fornia.

2. Botula (Strongylosperma) australis, ^{Stork.f.}

Brachylus australis, Sieb. Pl. Exsicc.
no. 331; Spreng. Syst. 3. p. 497.

Strongylosperma australe, Less. Syn.
Comp. p. 261; Db. Prodr. 6. p. 82.

Botula microcephala & sororia, Db.
Prodr. 6. p. 79?

C. bunninghamii, Stork.f. in Sched.

C. australis, Stork.f. Fl. N. Zeal. 1,
p. 129, & Fl. Tasm. 1, p. 191, ^{+ 50.}

Pleiogyne australis, C. Koch in
Bot. Zeit. 1, p. 40.

Stat. Sydney and Hunter's River,
New South Wales.

Leptinella, Bass., Stork.f.

1. Leptinella scariosa, Bass.

Leptinella scariosa, Bass. in Bull.
Philom. 1822, p. 127, & Dict. Sci. Nat.

2b, p. 67; Db. Prodr. 6, p. 141; Stork.
p. Fl. Antarc. 1, p. 28, & 308. (2, p.

L. pinnata, Cass. l.c.?

L. acanoides, Stork. & Arn. Jour. Bot.
3, p. 325; Remy in Gay Fl. Chil. 4,
p. 249.

Stat. Orange Harbour, Fuegia;
on rocks near the coast.

Dr. Storker has identified,
extended, and illustrated this genus
in a manner which leaves little
to be desired. It may be noted that
Remy has taken the view that the
present species is not Cassini's L.
scariosa; but this opinion, no
less than Dr. Storker's to the contrary,
rests upon circumstantial evidence.
At least I could find no specimens
at Paris named by Cassini.

2. Leptinella propinqua, Stork. f. l. c.

Hab. Lord Auckland Islands;
on banks near the sea. Dr. Holmes,

A single, but well marked
specimen, mingled with those of the
following species, of which it seems
more likely to be a form than
of the preceding, to which Perry
refers it.

3. Leptinella lanata, Stork. f.

Leptinella lanata, Stork. f. Zhl.
Nature, 1, p. 26, t. 19.

Hab. Lord Auckland Islands;
abundant on rocks overhanging the
sea.

Abrotanella, Cass.

Abrotanella, Cass. in Dict. Sci. Nat.
36, p. 27; Ab. Prodr. 6, p. 141; Hook. f.
Fl. Martae, 2, p. 208.

Oligospori Spec. Cass. in Ann. Sci.
Nat. 5, p. 104, t. 3, f. 4.

Veratella, Trineuron, & Sclerolaima,
Hook. f. Fl. Martae., & ~~Fl. Tas~~
N. Real. & Tasman.

1. Abrotanella emarginata, Cass. l.c.

Tab. Orange Harbour, Tazmania;

small specimens, resembling a tufted
Moss, ^{intermixed with} ~~entangled among~~ those of the
following species; and of Nassauvia pygmaea.

2. Abrotanella (Veratella) ^{submarginata} ~~bryoides~~,
Sp. Nov. (Tab.)

~~A. confertissima caespitosa, depressa;
foliis erectis ^{et basi erecta} patentibus~~

(Sp. Nov. (Tab.)

2. Abrotanella (beratella) submarginata

A. pulvinatum.
~~confertum~~ caespitosa; ~~depressa~~;
foliis crebris linearibus e basi
erecta patentibus sursum leviter
callos-marginatis truncato-ob-
tusis vel retusis; capitulis soli-
tariis subsessilibus paucifloris;
involucri squamis subuninerviis;
acheniis obsolete 3-4-nerviatis
angulatisve inferne hirtellis
apice pappo corniformi et
pauciaristulato ^{vel dentato} superatis.

Ital. Grange Harbour, Fre-
gia.

A dwarf, depressed, ~~drooped~~,
glabrous little plant, in foliage
and aspect nearly intermediate between
the preceding and the succeeding

Plants (which certainly look
very differently), ~~the~~ⁱⁿ general appear-
ance very like Ceratella rotundata,
Hook. f.; but the leaves smaller
and narrower. These are about
three lines long; the base scar-
ious-margined and appressed; the
upper half squarrose-spreading,
short-linear, thickish, somewhat
obscurely cartilaginous-margined,
obtuse, truncate, or barely retuse
at the tip. Head and flowers
nearly as in A. emarginata;
but the achenia are somewhat
hairy, especially below, and crow-
ned with a rather conspicuous
~~thin~~ and pappus, consisting of
a thin scarious coronula, which
is irregularly toothed or more com-
monly extended into 2 to 4 setiform
arcs, their length equal to the

breadth of the achenium. The pappus is about the same in both kind of flowers, but the central or subhymenophytorite ones are apparently infertile.

~~A reduced~~ Nothing is less reliable, at least generically, than ^{distinctions} ~~characters~~ founded upon the presence of a paleaceous, coroniform, or other reduced form of pappus, and its absence. Unless genera are to become completely artificial and almost innumerable, it would appear ~~from~~ that this and the following species ^{call for} ~~demand~~ the reduction of Dr. Hooker's Ceratella, Trineuron, and therefore Scleroleima, to Horanella, - a conclusion for which the founder is evidently prepared.

Plate

linearifolia, Sp. Nov. (Tab.)

3. Abrutella (Ceratella) ~~monticola~~

A. laxe caespitosa; foliis linearibus seu linearisubspathulatis immarginatis patulis, superis capitulum pedunculatum adquantibus; involueri 2 quavis valibus sub 2-3-nervatis; floribus femineis 2-3, hermaphroditis 6-8 stylo fil. m. bipido, omnibus sepiissime fertilibus; acheniiis glaberrimis elongato-obovatis apice costis 4-costatis apice subcontractis proppro obscure cupulato sub 4-dentato truncato nunc sub 4-dentato nunc plane 4-areolulato superatis.

Tab. Orange Harbour, Luigia,

This little plant, with the
aspect and foliage of ^{*A. spathulata*} Dr. Horke's
although upon a somewhat smaller scale,
Trineuron spathulatum, has the
floral characters of ~~*A. spathulata*~~ ^{*A. (Ceratella)*}
rosulata; - except that the ~~disk~~ ^{receptacle}
~~flowers appear~~ are stamini-
flowers are truly hermaphrodite,
their stigmas more or less bifid,
and apparently as fertile the one
or two marginal ones, which
have a more slender corolla and
only vestiges of stamens. The
~~achenes~~ corollas all have the same
purple or crimson hue; the are
exserted beyond the involucre, which
barely equals the full-grown achenia.
The latter, in our specimens have the pappus represented
by a short cupule which is re-
spandly or obscurely four-toothed (therefore intermediate between Horke's

Ceratella and his Scleroleima,
but the summit of the achenium
under it contracted into somewhat
of a neck): but the flowering
specimens exhibit four decided,
rather unequal, subulate arms
in place of the obscure teeth, i.e.,
~~corresponding with~~ ^{answering to} the
~~ribs or angles~~ or rather ribs
of the achenium, in length
mostly exceeding the width of the
ovary: - the central and the mar-
ginal flowers all alike in this
respect. Leaves rather fleshy,
crowded on the short stem, but
lax, obtuse, nearly half an
inch long, a line or less in
width, wholly destitute of ~~a~~
callous margins. Peduncle when
well developed 2 or 3 lines long.

Involucre rather more than a line
long; the scales oval, very obtuse,

finished with scarious margins,
and two thickened nerves, the mid-
~~nerve~~ nerve between them obscure.

Plate.

Centipeda, Lour.

1. Centipeda minuta.

Centipeda minuta, Forst. Prodr. p. 57;
Müll. Spec. 3. p. 2163.

C. cuneifolia, Müll. l.c.

Atemisia minima, Linn. Spec. 2. p.
1190; Burm. F. Ind. p. 177, t. 58.

Centipeda orbicularis, Lour. Fl.
boch. 2, p. 602; Mig. Fl. Ind.
~~Bot~~ Bat. 2, p. 89.

Myriogyne minuta (& M. elatino-
oides), Less. in Linnaea, 6, p. 219;
Dc. Prodr. 6, p. 139; Hook. f. Fl.
N. Zcal. 1, p. 130, & Fl. Tasman. 1,
p. 194.

Sphaeromorphaea? Centipeda, Dc.
Prodr. 6, p. 140.

Stat. New Zealand, Heijze Islands,
Society Islands.

2. Centipeda bunninghamii.

Myriogyna? bunninghamii, Db.
Proc. 6, p. 139.

Hab. New South Wales, on
Hunter's River. Specimens of this
and the next are in the collection
labeled as from the Bay of Islands,
New Zealand; but I have reason to
suppose that they were gathered in
Australia.

3. Centipeda petiolaris.

Sphaeromophaea petiolaris, Db.
Proc. 6, p. 140.

Hab. With the preceding, and at
Sydney.

Artemisia, Torr., Linn.

1. Artemisia australis, Less.

Var. a. Eschscholiana; foliis adultis
subtus canescentibus supra
glabris, lobis foliorum planis
sepius parce incis.

Artemisia australis, Less. in
Linnaea, 6, p. 522; Dc. Prodr. 6, p.
106.

A. Eschscholiana, Bess. Abot.
no. 7, ex Dc.

Var. β . Maiensis; foliis utrinque
incanis, vetustissimis supra gla-
brescentibus, partitionibus lobis-
que plerumque filiformibus
integerrimis.

Hab. Sandwich Islands, Var.
a. Kaala Mountains, Oahu ^(also) collected
by Chamisso, Seemann, &c.; and on
Kauai, - a mere fragment. β . Eastern
part of Maui, at the base of the
crater.

specimens of
The ordinary state of the species
accord with those collected by Cham-
isso. The variety might naturally
be taken for a distinct species,
the whole foliage, ^{the filiform} pedicels, &c. being
as silvery-grey as in A. frigida,
and the divisions of the leaves
filiform; but the vestiges of leaves
on some older branches show a
manifest transition. Both forms
are decidedly shrubs.

Calocephalus, R. Br. (gen. auct.)

Calocephalus & Leucophytia, R. Br.
in Linn. Trans. 12. p. 106; Cass.;
in ^{Syn. p. 279} Less.; Db. Prodr. 6. p. 151, 152;
Stork. f. Fl. Tasm. 1. p. 196.

1. Calocephalus citreus, Less.

Calocephalus citreus, Less. l.c.; A.
Mouge, Bot. Voy. Bog. t. 60, p. 4;
Db. l.c.

Hab. Hunter's River, New South
Wales.

DeCandolle to some extent con-
founded this with Pycnosorus glo-
bosus; at least, the ^{specimen} ~~plant~~ which
he communicated to the Paris Museum
under the present name is a Pycno-
sorus.

The union of Brown's two genera
now appears to be unavoidable. Dr.
Storker, indeed, recently states that

Leucophyta "differs materially from Caloccephalus in the alternate leaves, in the glomeruli being subtended by short leaves, in the bractæ seated among the capitula, in the more numerous involueral scales, in the pedicelled achenia, and in the larger, more copious and plumose pappus." But the involueral scales in Caloccephalus lacteus are about as numerous as in C. (Leucophyta) Brownii, ^{and} the achenia of C. citreus are ^(as) much pedicellate, ~~as those~~; while C. Sonderi, F. Mueller, ined. has alternate leaves, of which the uppermost form a general involucre ~~for~~ to the glomerule; and the setæ or rather scales of the pappus plumose (although rather sparsely) for their whole length. All the species accord in habit and form a good natural genus.

Pycnosorus, Benth.

1. *Pycnosorus globosus*, Benth.

Pycnosorus globosus, Benth. Pl. Angl.
el. p. 63, adn.; *Sunder* in *Linnaea*,
25, p. 491.
Calocephalus citreus, *Lab.* in *Herb. Mus. Par.*, *vix Endr.*

Stat. Hunter's River, New South
Wales.

Distinguished from the preceding
genus by the lamate receptacle,
the few and thin involueral scales
shorter than the flowers, and these
accompanied by hyaline ^{rather} palea; the
^{size of the pappus} more numerous and ^{equally} plumose.
I could detect no neutral flower,
but often an infertile or less
developed hermaphrodite one in the
centre of each capitulum, and
I therefore modified ~~the~~ Benthian's
character in this respect, in *Klein*
Journ. Bot. 3, p. 99. Dr. *Sunder* has
recently well characterized the genus
~~anew~~ anew, and added a second
species which is unknown to me. —

the achenia pilose.

and ~~the~~ one collected at Moreton Bay by
by Mrs. Mallard,

The two specimens of the present collection, differ from Mr. Benthams, and from all others examined, in having the bristles of the pappus & almost all the flowers, concreted for one third or ^{into a tube (which is setaceous pubescent)} ~~even~~ for half their length; - a character which is not likely to be ~~constant~~ specific or constant. Benthams did not notice any such concretions in the specimens upon which he founded the genus. Under remarks that the setae are united at their base.

Craspedia, Forst.

1. Craspedia Richea, Bass.

Hab. Sydney, New South Wales;
a slender form.

Ammobium, R. Br.

1. Ammobium alatum, R. Br.

Hab. Near Sydney, New South
Wales.

Cassinia, R. Br.

1. Cassinia rosmarinifolia, A. Cunn.
2. Cassinia quinquefaria, R. Br.

Hab. Near Sydney, New South
Wales.

Ozothamnus, R. Br.

1. Ozothamnus rosmarinifolius, DC.
2. Ozothamnus ferrugineus, DC.

Hab. Near Sydney, and Woolong,
New South Wales.

3. Ozothamnus Nauvilliersii, Humb. ^{+ Jacquinot.}

Ozothamnus Nauvilliersii, Humb. &
Jacquinot, Bot. Voy. Pol. Sud, t.
5; Stork. f. Fl. Antarc. 1, p. 29.

Hab. Lord Auckland Islands;
very common, Dr. Holmes.

Leptorhynchus, Less.

1. Leptorhynchus hemisphaericus, St.

Hab. Hunter's River, New South
Wales.

Podolepis, Labill.

1. Podolepis acuminata, R. Br.

Hab. Hunter's River, New South Wales.

Helichrysum, Vaill., DC.

1. Helichrysum obconicum, DC. &
2. Helichrysum melanophthalmum, Less.

Hab. Madeira, on rocks, &c. along
the Coast.

3. Helichrysum vestitum, Less. & var. lingulatum, DC.

4. Helichrysum teretifolium, Less.

5. Helichrysum cymosum, Less.

6. Helichrysum parviflorum, DC.

7. Helichrysum serpyllifolium, Less.

8. Helichrysum fruticosum, Less.

Hab. Cape of Good Hope, in the
vicinity of Cape Town.

9. Stelichrysum leucopodium, Seb.
10. Stelichrysum scorpioides, Labill.
11. Stelichrysum molle, A. Bunn., var.
12. Stelichrysum bracteatum, Willd.

Stat. New South Wales; all from Hunter's River, except St. leucopodium, which was gathered at Sydney, and which accords with the Tasmanian species. St. molle was collected only in a narrow-leaved variety; the species differs but little from St. scorpioides.

Chryscephalum, Walp.

1. Chryscephalum apiculatum Steud.
(+ b. flavissimum),
Chryscephalum apiculatum Steud.
in Pl. Preiss. 1, p. 474, adn.; Sund.
in Linnaea, 25, p. 516.
- Graphalium apiculatum, Labill. Pl.
Nov. Holl. 2, p. 43, t. 188; Ker. Bot. Reg. 7.

Helichrysum apiculatum, D.C. Prodr.
6, p. 195; Hook. f. Fl. Tasman. 2, p.
212.

Stat. Near Sydney, New South
Wales: a form with rather small
heads and leaves.

2. Chryscephalum ^{Steud.} semipapposum

Chryscephalum helichrysoides, Walp.
in Linnaea, 14, p. 503

C. helichrysoides, semipapposum, & aspe-
rum, Steud. l.c.; Sand. l.c.

Graphalium semipapposum, Labill.
l.c. t. 187.

Helichrysum semipapposum, D.C.
l.c.; Hook. f. l.c.

Stat. Hunter's River, Moolungong,
N.S. New South Wales; the vars. lati-
folium, filifolium, &c. Also ~~an~~ imperfect specimen of a (var. as-
perum), with somewhat glutinous leaves,
&c. — The marginal female flowers usu-
ally have a pappus of one or two setae,
similar to those of the hermaphrodite, which are

from six to ten in number.

Helipterum, Db.

1. Helipterum (Sericophorum) ^{Db.} anthemoides, Db.

Helipterum anthemoides, Db. Prodr.
6, p. 216; Hook. f. Fl. Tasman. 2, p. 215,
t. 61; Gray in Kew Jour. Bot. 4, p. 231.

H. punctatum, Db. l.c.; Sand. in
Linnaea, 25, p. 519.

Helichrysum anthemoides, Sieb.; Spreng.
Syst. 3, p. 484.

Hab. Hunter's River, New South
Wales, (The two Vandellian species
rightly joined by Dr. Hooker.)

Achyrocline, ^(Lam.) Db.

1. Achyrocline satureioides, Db.

Hab. Rio Negro, North Patagonia,
Rio Janeiro, Brazil, var. flaccida.

Lessing apparently with good reason referred Gnaphalium flaccidum to G. (Achyrocline) satureioides, Lam., and it seems evident that Se-
baste's A. satureioides, Varasiana, flaccida, rufescens, and perhaps matthioloefolia, are merely forms of one species, which ranges from the northern borders of Patagonia to New Granada.

2. Achyrocline Nanthieriana, DC.

Hab. Rio Janeiro, Brazil. (Distinguished by the narrowly decurrent leaves.)

1. Gnaphalium, Lin.

1. Gnaphalium lutes-album, Lin.

Hab. Madeira; the common and a low, diffuse form. St. Helena. Sydney, New South Wales. Bay of Islands, New Zealand. Peru, at ~~Lima~~, Callao, Lima, and Obrajillo. Chili, in the vicinity of Valparaiso (G. Vira-vira, Mol., DC.). Sandwich Islands, on Oahu, Maui,

Kanai, and Hawaii: this, the G. Sand-
wicensium of Gandichand^{here}, occurs under a variety of forms, but all are, I believe referable to G. lutes-album. It ascends the mountains up to the region of Edwardia.

2. Gnaphalium cheiranthifolium, Lin.

Hab. Rio Negro, North Patagonia.

3. Gnaphalium paniculatum, Colla.

Chili, in the vicinity of Valparaiso. To this species may be ~~referred~~ referred G. citrinum, Hook. & Arn., and G. Candelabrum of the gardens, and perhaps G. puberulum, DC.

4. Gnaphalium Gaudichaudianum, DC.

Hab. Rio Janeiro, Brazil. (The Gnaphalium decurvens of Schrank's Pl. Rar. Hort. Muae. t. 84, doubtfully referred here by De Coudolle, and also to this G. puberulum, is manifestly a Pterocaulon, judging from the original drawing, in my possession.)

5. Gnaphalium lanuginosum, HBK.

Hab. Andes of Peru, from Obrajillo to Baños, Cuzco, etc. Probably G. Dombeyanum, DC. Occurs under a variety of forms, some of the smaller approaching the following.

b. Gnaphalium Polium, Wedd.

Gnaphalium Polium, Wedd. Chl. And.
1, p. 147.

Hab. Alparmarca and Casa Blanca,

in the high Andes of Peru.

7. Gnaphalium lacteum, ^{& Walp.} Meyen

Gnaphalium lacteum, Meyen & Walp. Rel. Meyen, p. 276; Wedd. l.c. p. 146, t. 24.

Hab. High Andes of Peru at Al-pamarca, Casa Blanca, B.

One specimen only shows the milk-white scales of the involucre to which this little species ~~of~~ owes its name; in all the others they have turned fuscous. The plant forms depressed tufts only an inch or two in height.

8. Gnaphalium cymatioides, Kunze.

Hab. Chili, near Valparaiso. Also (~~except~~ unless the tickets have been mis-applied) Rio Negro, North Patagonia.

cratum, Forst.
9. Gnaphalium (Euchiton) involu-

Hab. New South Wales near Sydney.
Bay of Islands, New Zealand. —

In this species most of the species
of De Boudollé's section Euchiton may
be referred, and also Thunberg's G.
Japonicum.

10. Gnaphalium (Euchiton) collinum, ^{Labill.}

Gnaphalium collinum, Labill. Fl. N.
Holl. 2, p. 44, t. 189; Hook. f. Fl. N.
Zeal. 1, p. 139, & Fl. Tasman. 1, p. 216, &
2, p. 368.

Hab. Bay of Islands, New Zealand.
A single specimen ^{was} collected; doubtless
of this species, which, however, ^{is probably} ~~may be~~
only a variety of the preceding. But
the involueral leaves are inconspicuous,
and the plant connects ~~this sect~~
the involucrate section with the Gamo-
chaete.

11. Gnaphalium (Gamocheta) purpureum, Linn.

Gnaphalium purpureum (Linn.),
spicatum (Lam.), falcatum (Lam.),
stachydifolium (Lam.), Americanum
(Mill.), Pennsylvanicum (Mill.),
spæculatum (St. B. K.), consanguineum
(Gaud.), affine (D'Urville),
Chamissonis, Berterianum, fil-
agineum, floccosum, ^{etc.} D.C.
Prodr. b. p. 232-235.

Gamocheta Americana, Wedd.
Chlor. And. 1. p. 154, 229.

Stat. Rio Janeiro, and in the
Organ Mountains, Brazil, the G.
spicatum, Lam. Rio Negro, North
Patagonia, referable to G. falcatum,
Lam. Obrajillo, Andes of Peru, the
G. spmaculatum, St. B. K. Valparaiso,
a very depauperate G. Berterianum, D.C.

Rio Negro, North Patagonia and
Orange Harbor, Fuegia, the re-
duced, Antarctic variety, G. con-
sanguineum, Gand., Gamocheta
Americana, var. alpina, Meddell.

These diverse forms belong,
as we are constrained to believe,
to one polymorphous species,
which ranges from lat. 43° on
the eastern coast of North America
and from ^(Oregon) ~~California~~ on the west-
ern coast, to the southern ex-
tremity of the continent in a
considerably higher latitude.
The Fuegian forms are lax and
flocculent, like the most nor-
therly ones, but are still more
reduced in size, the smaller
less than a span high. Without
a series of intermediate forms the
reduced, Antarctic varieties would

to the fully developed and typical
subtropical type of the species,
represented by G. spicatum. In
the United States the Linnean G.
purpureum manifestly ~~passes~~
~~into~~ effects this transition, and
I think with ^{Dr.} Storker and Wed-
dell, that the extreme southern
forms are not specifically different.
Nor can I well distinguish from
G. purpureum of the Northern Uni-
ted States a plant which Mr.
Charles Wright, in the North Pa-
cific Exploring Expedition, collected
at Hong Kong, and the same thing
was gathered by Dr. Thomson, on
the plains of Upper India, and was
distributed as a variety of G. Indi-
cum. The latter species has the
bristles of the pappus distinct,
to the base.

Weddell's genus Gamochaeta,

established for this group, upon the
union of the bristles of the pappus at
the base into a ring, should
probably be adopted; but the
species so ~~nearly~~ closely approach
G. indicum, G. on the one hand,
and G. involucreatum and its
allies on the other, while the
sole technical character seems
almost valueless in Helichrysum,
G., that the way to its adop-
tion is not yet clear.

Lucilia, Cass.

Lucilia, Cass. Bull. Philom. 1817;

Ob. Prodr. 7, p. 45, ~~Remy in~~ ^(excl. 83)

Lucilia, Belloe (Remy), & Merope ^{excl. 83}

Wedd. Chlor. And. 1, p. 154, 159,

160.

1. Lucilia.

The genus Lucilia, correctly
reunited to the Gnaphalieae by
Remy (in Ann. Sci. 3, 12, p. 180), is
rightly described as to the pappus
by Weddell. Belloa seems too
slightly distinguished by the papp-
illose instead of silky achenia,
and Merope, by the ^{at length} spreading, instead
connivent scales of the involucre.
In some they appear neither
to spread nor to connive.

Nuttall's Gnaphalium depress-
[invas. of the leaf]

sum, described from Pichincha
specimens of Prof. Jameson's collec-
tion (no. 642 and 57) is not the
G. radians, Kunth, the L. (Munz)
Kunthiana, but apparently L.
convidea of Weddell, or near it,
though larger.

1. Lucilia graphalioides, Less.

Lucilia graphalioides, Less. in
Linnaea, 5, p. 363; Db. l. c.

L. argentea, Stork. & Arn. Comp.
Bot. Mag. 1, p. 102; Db. l. c.

Stat. Rio Negro, North Patago-
nia.

This is certainly Storker and Arn-
ott's L. argentea (which, by a ty-
pographical error, in DeBaudville's
Prodrusus said to be three- (instead
of thirty-) flowered; but the earlier
L. graphalioides is evidently
founded on a depauperate form of
the same species.

2. Lucilia (Merope) pipistolepis, Medd.

Lucilia pipistolepis, Medd. Chlon. And.
^{1, f. 26, B.}
Merope pipistolepis, Medd. l. c. p. 162.

Stat. High Andes of Peru,
between Culmá and Casa Ban-
cha.

The specimens are more tufted
and the sterile shoots apparently
more caulescent than ~~appears to~~
Noddell's plant (also from the
Peruvian Andes) appears to be,
the sterile shoots leafy throughout;
the leaves squarrose-spreading,
somewhat as in L. recurva, about
two lines long, val-ovate. ~~Head~~
Heads solitary, nearly 3 lines long;
the scales chestnut-color, conni-
vent in front, at length recurved.
Achenia densely papillose.

3. Lucilia (Meryse) Schultzii,

Gnaphalium evacoides, Schultz,

Bip. in Boisslandia, 1856, p.

⁵⁴Meryse Schultzii, Nodd. Chlor. And.

1, p. 163.

Hab. Andes of Peru, with the preceding species.

A minute, depressed species, with the habit of Silene acaulis; the leaves of the sterile shoots sometimes two lines long, including the base, the limb nearly plane; those of the ~~fertile~~ densely tufted fertile stems densely imbricated, half a line long, channelled or partly complicated in the dried specimens. Heads 2 or 2½ lines long. Achenia glabrous.

4. Lucilia (Mexope) Pickeringii, ^{Mr.} Sp. {

L. cano-tomentosa, multiceps, depressa; caulibus confertis uncialibus

foliatis; foliis spatulatis
seu obovatis obtusis planis
dense undique lanuginosis;
capitulis subsolitariis sessili-
bis cylindraceis; involucri
squamis ^{interioribus} linearibus obtusi-
usculis radiis discum ~~aequa~~
aequantibus; acheniis minu-
tum papillois.

Var. ? β . minor, condensata,
pube appressa; capitulis
minoribus aggregatis.

Hab. Andes of Peru, between
Baños and Alparamba. Var. β .
Between Casa Blanca and Cul-
maí.

Stems an inch or two in
height, numerous and tufted from
a perpendicular root, leafy through-

out; the leaves much crowded
around the sessile head, spat-
ulate-obovate, from a third to
half an inch long including
the narrowed base, soft, densely
clothed with lax white wool.
Heads 3 times long, half im-
mersed in the tuft of leaves.
Exterior scales of the cylindraceous
involucre oblong and woolly; the
others linear, glabrous, dark chest-
nut-brown, scarcely exceeding
the capillary pappus, conniving
after fructification, at length spread-
ing? Achene minutely glandu-
lar. — The doubtful variety is
more condensed and caespitose,
smaller, with a closer or appres-
sed tomentum; the heads more
numerous and smaller^{ly}; but there
is an intermediate form.

Antennaria, Gartn.; Nees.

§. Mniodes, — Planta andicola,
densissime pulvinato-cespitosa,
musci-formes, cinereo-tomentosa;
foliis obovatis squamiformibus
creberrimis arcte imbricatis; capitulis ^(solitariis) in apice
ramulorum inter folia sessilibus
ferè abconditis; divica.

A. Antennaria (Mniodes) andina, Sp. nov.

A. foliis lingulato-subcuneatis
ferè truncatis vel retusis utrinque
pilis longis crebris villosocristis;
involveri squamis linearibus obtusis; achenis
glabris; pappi setis

fl. masc. apice subit o
~~capitato-incrassatis~~ valde
~~clavato-incrassatis~~,

Stat. Alparama, on the
high Andes of Peru. (Also collected
by Standke; ^{Pide} sp. ex a Schult. Bip. comm.)

Plant forming dense and
cushion-like perennial tufts,
in the manner of Diaperis or
of Leucobryum; the stems only
about an inch high, branching;
the branches compactly appressed,
~~exposing~~ ^{apparently truncate} exposing only their sum=
mits, thickly clothed with the
very densely imbricated leaves, or
below with their decaying vestiges,
hoary, the tips of the dorsal
side of the individual leaves, be=
coming somewhat glabrate, only
~~visi~~ distinguishable ^{(under} with a lens,
Leaves from $1\frac{1}{2}$ to 2 lines long,
scale-like, ~~with rather~~ scarious,

but gradually becoming obscurely
~~towards the base~~, but (herbaceous
at the truncate^{or} very obtusely
rounded, sometimes retuse, sum-
mit, from which it gradually
narrows downward, to the broad-
ish base, very entire, obscurely
one-nerved, closely appressed,
both faces thickly clothed with
long and straight villous
hairs, which are easily de-
tached. Heads 2 lines long,
cylindrical, terminal, solitary,
immersed in, or the summit
a little projecting beyond the
compact mass of foliage, di-
oecious; those of each sex about
12-flowered. Exterior scales of
the involucre or ultimate leaves,
(more properly the latter) resem-
bling the proper leaves but
narrower and more scarious,
truncate, the others, or true

involucral scales ~~few~~, a
single series, rather broadly
linear, obtuse, not narrow-
ed toward the base, glabrous,
thinly scarious or hyaline, the
tips fuscous, as long as the
disk, not radiant. Flowers
as in Antennaria. Ovaries and
achenes glabrous. Bristles of
the pappus conereted into a
ring ^{at the base} and somewhat polyadel-
phous; those of the male flow-
ers rather scanty, obscurely
denticulate under a lens, very
strongly and abruptly thickened, or
clavately capitate, at the apex;
those of the female flowers
more copious, more evidently poly-
adelphously aggregated, rather
rigid, capillary, denticulate.
(Unioles)

A. arctioides (Baccharis arcti-

tioides, Schultze Bip., Mertse are-
tioides, Wedd., Chlor. And. 1. p. 154,
t. 25), which I know only
from Weddell's description and
figure, ^{and from a fragment of Seebler's plant sent to me by Dr. Schultze} is evidently a near
relative of our plant, inhabit-
ing the high Peruvian Andes
a little further south. But
this appears to have more ob-
ovate, ~~and~~ less truncate, and much
less villous leaves, a slightly
different involucre, papillose
sterile avaria (the fertile plant
unknown), and the ^{bristles of the} male pappus
very gradually and moderately
thickened upward. The habit is
so peculiar that I had ^{long ago} designated
our plant as the type of a genus;
but the flowers accord with Anten-
maria.

Chevrenlia, Cass.

1. Chevrenlia acuminata, Less.

Chevrenlia acuminata, Less. in Linnaea, 5, p. 261; Ob. Prodr. 7, p. 45.

C. filiformis, Stork. & Arn. Comp.

Bot. Mag. 1, p. 102, forma capitulosa sessili.

Leucopodium campestre, Gardn.

in Stork. Land. Jour. Bot. 4, p. 124.

Itab. Brazil, in the Ogare Mountains, (Peduncle sometimes very short, commonly elongated.)

Metalsia, R. Br.

1. Metalsia aristata, Ob.

2. Metalsia divergens, Don.

3. Metalsia capitata, Less.?

Hab. Cape of Good Hope, in the vicinity of Cape Town. - The heads of the last enumerated species ~~are~~ bear from five to ten flowers.

Elytropappus, Cass., Less.

1. Elytropappus Rhinocerotis, Less.

Hab. Cape of Good Hope near Cape Town. - "Rhinoceros-bush". Setae of the pappus sparsely plumose almost to the base.

Stoebe ^{Linn.} " " Less.

1. Stoebe alopecuroides, Less.

Hab. Cape of Good Hope, in the vicinity of Cape Town.

Seriphium, Linnaeus, Less.

1. Seriphium plumosum, Linnaeus.

2. Seriphium fuscum, Linnaeus.

Hab. Cape of Good Hope, near Cape Town. The latter species with the glomerules mostly elongated into oblong spikes, and the foliage less caescent.

Perotriche, Cass.

1. Perotriche tortilis, Cass.

Hab. Cape of Good Hope, in the vicinity of Cape Town.

Trichogyne, Less., Thunb.

1. Trichogyne laricifolia, Less.

Hab. Cape of Good Hope, near
Cape Town.

Neither Lessing nor Sebandtke
mentions the character which
doubtless suggested the ^{generic} ~~specific~~
name, viz., that the fertile achen-
ium is beset with very long and
lax, woolly hairs. The pappus of
the sterile flowers consists of four
or five bristles, which are lamellate-
penicillate above; the sterile ova-
ries also bear a few long and del-
icate hairs.

Leyssera, Lin.

1. Leyssera tenella, St.

Hab. Cape of Good Hope, in the
vicinity of Cape Town: the var.
subcanescens.

Erechtites, Raf., Db.

1. Erechtites hieracifolia, Raf.

Hab. Brazil, at Rio Janeiro.
Distributed over the American Continent from Canada to Paraguay.

2. Erechtites valerianifolia, Db.

Hab. With the preceding; from which it is distinguished by the slender petioles, smaller heads, and violet-purple pappus.

3. Erechtites arguta, Db.

Senecio argutus, ^{A.} Rich, ~~& Less.~~ Fl.
N. Del. p. 258

Erechtites arguta, Db. Prodr. 6, p.
296; Hook. f. Fl. N. Del. 1, p. 142,
& Fl. Tasman. 1, p. 219.

Hab. ~~Lord Auckland Islands,~~

Var. β . glaberrima: undique
glabra et laevis; foliis caulinis
sinuato-pinnatifidis, ramulibus
parce dentatis.

Erectiles proanthoides, Stock. f.
Fl. Antarc. 2. p. 544.

Var. γ . glabrata (Stock. f.): undique
glabra; foliis sinuato-pinna-
tifidis asperulis.

Erectiles arguta, var. glabrata,
Stock. f. Fl. Tasman. 1. p. 219.

Var. δ . hispidula: subarenosa, vel
pilis crispulis cinerea, vel
nuda, caulibus praesertim foliis
hispidulis vel asperatis. — Ludit,
foliis linearibus, lanceolatis, vel
oblongis, denticulatis, incisis, vel pin-
natifidis lobis incisis.

Senecio hispidulus, A. Rich. ~~& Less.~~
l. c. & Det. Astral. p. 92, t. 34.

S. squarrosus, Rich. Sut. Astrol.

p. 108?
S. asper ^(+ S. glandulosa?) A. Cunn. ined.

Erechtites hispidula, glandulosa?

+ Richardiana, Db. l. c.

E. hispidula & E. arguta var.
aspera, Hook. f. l. c.

Var. γ. tenuisecta: glabra, laevis,
nisi foliis sub lente minutis-
sime scabellis plerisque bi-
pinnatifidis, lobis angustis-
sime linearibus

Stat. Var. β, Lord Auckland
Islands. Sydney, New South
Wales. ^{Bay of Islands, New Zealand,}
Hunter's River, New South
Wales, a form with narrow and
denticulate leaves (E. glandulosa, Db.?)
another with pinnately parted and
incised leaves, Sydney, New
South Wales.

All the above, with E. pre-
nanthoides, smaragdoides & glabres-
cens, DC., and perhaps others,
must be regarded as forms of one
very polymorphous species. The
dilatation of the apical border
of the achenium, bearing the
pappus, cannot be relied upon
to distinguish sections in the genus,
as attempted by DeCandolle, nor
for the discrimination of species
as endeavored by Dr Hooker. As to
the foliage, nothing can be more
variable. Our var. tennisecta
would ~~not~~ prefer the strongest
claim in this respect; but
it is connected with the others ~~the~~
through a remarkably pinnati-
fid and rough form, intermediate
between E. hispidula and E. arguta.
Many of these plants are ascirose
when young, but soon very glabrous,

as is common in Senecio. Dr. Hooker characterises his E. pum-
anthoides,^{DC.} as perfectly smooth
and glabrous; but DeCandolle
writes "caule glabriusculo" and
"foliis subtus asperosis", which ac-
cords with some Australian spec-
imens. The New Zealand speci-
mens I have seen belong to E.
sonchoides (Senecio flaccidus, A.
Rich.), probably only another state
of the species.

Hook. f. l. c.

5. Erechtites quadridentata, DC.

Senecio quadridentatus, Labill.
Fl. N. Holl. 2, p. 48, t. 194.

Erechtites quadridentata & E.

tenuiflora, DC. Prodr. 6, p. 295,
296.

Stat. Hunter's River, New
South Wales. (E. tenuiflora is only
a glabrate form.)

1

Gynura, Cass.

1. Gynura sarmentosa, DC.

Hab. Luzon, in the Majajai Mountains near Manila.

Emilia, Cass.

1. Emilia sorckifolia, DC.

Hab. Luzon, in the mountains near Baños.

Werneria, H.B.K.

An interesting and now somewhat polymorphous Andine genus, like its analogue Senecio either radiate or discoid, the rays either yellow, white, or rose-color; the branches of

2

The style either truncate, or, in a few species, tipped with a setiform appendage. In one remarkable species the receptacle is alveolate, in ^{one or two} ~~several~~ the leaves of the branches, or some of them, are opposite. In several species there are five abnormal nerves to the corolla, occupying the axis of the lobes, as in DeCandolle's Mesogramma, but this is of little consequence or constancy.

3
1. Wernneria nubigena, St. B. K.,
var. graminifolia, Phil.

Wernneria nubigena, St. B. K.,
M. Gen. & Spec. 4, p. 193;
Nedd. Schlor. And. 1, p. 80, t. 16,
excl. var. S.?
W. nubigena, disticha, & gram-
inifolia, St. B. K. l. c.

(or busa Bancka, in the
Stat. Alpamarca, } High Andes
of Peru.

The specimens belong to a
small form of the species, nearly
Kunth's W. graminifolia, but with
(not as in Modell's figure)
hardly any rhizome, the leaves
1½ to 2 lines wide. Sappous (as figu-
red by Kunth) a little more strongly
denticulate than in the W. dis-
ticha. Ovaries silky-villous, as
in the species; in this respect the
plant ^{differs} ~~varies~~ from Kunth's descrip-

tion of M. graminifolia ^(in 4) which a
glabrous ovary is figured and
described. It is ~~not~~ so in Red-
dell's figure of M. rubigera,
who does not allude to this char-
acter in the text under any spe-
cies. Although the achenia are
not villous in the genus generally,
as DeCandolle supposed, they
^(very much) are so in the present species,
at least in M. disticha, ~~the~~
its most developed form. In
all the rest, so far as I have
^(excepting one apendicular new species)
examined, they are glabrous. - The
lobes of the Disk-colla occasion-
ally exhibit a mid-nerve, of which
there is no trace in other flowers.
This is so in most of the species,
^{misprinted M. frigida by DeCandolle,}
M. rigida, M. B. K. ^{is}
clearly the larger form of M.
primula, M. B. K.

5

L.C.

2. Werneria Obignyana, Wedd.

Var. breviradiata: involucri laciniis 10-14 ligulas breves
^{foliis oppositis integerrimis.}
aequantibus; (Tab. 4.)

Werneria nuda, Gray, ined.
W. nubigena, var. canescens, Heiöcupa,
Wedd. Chlor. And. 1, p. 81?

Tab. High Andes of Peru,
near Casa Barcha. Peruvian
Andes, McLean, in Herb. Hook.

Whole plant glabrous, no
wool whatever on the rhizoma
(which is creeping and elongated)
nor on the bases of the leaves.
The latter, although numerous
and clustered at the base of the
scape or flowering stem, do not
form a rosette. These leaves are
in our specimens about two in-

ches long and entire, in a larger
 one collected by McLean 3 inches
 long, including the long atten-
 uated base or petiole, and most
 of them more or less decidedly
 three-toothed at the obtuse apex;
 in all they are narrowly spat-
 ulate in form, of a thick and
 rigid texture, and of a dark hue,
 apparently they were fleshy - cori-
 aceous in the living plant, their
 margins, particularly ~~towards the~~
 below the middle ciliated with
^{minute} ~~small~~ salient denticulations. The
 scape, also, is mostly shorter than
 the leaves, 6 to 12 lines long, or
 in McLean plant 2 inches long,
 bearing a few leaves, the upper-
 most reduced to linear bracts, In-
 volucre campanulate or some-
 what turbinate, of the same firm
 texture as the leaves, the lanceolate

divisions as long as or longer
than the tube and very slightly
scarious on the margins. All
these characters plainly point
to Weddell's M. Orbignyana,
which was collected on the moun-
tains of La Paz in Bolivia. But
our plant differs from the char-
acter of that species, ^{most} probably
not specifically, in its mostly
smaller heads, the involucre
reduced (from about 20) to 14 or
even to 10 lobes, and in the
shorter ~~scarious~~ rays, which
seldom surpass the involueral
divisions. Their color is uncer-
tain, probably not yellow. Re-
ceptacle convex, obscurely alveolate.
~~than~~ Corolla of the disk-flowers
commonly 10-nerved, the interca-
lated or false nerves extending from

8
The tips of the lobes ^{(from} to the
insertion of the stamens. Branches
of the style truncate, minutely
nairy at the extremity, otherwise
naked. Achenea short-oblong,
glabrous. Pappus shorter than
the disk corolla, minutely den-
tulate.

Plate A. Nermeria
Reddelliana Obignyana,
var. breviradiata; natural size. Fig. 1.
A ray flower, 2, corolla, and stamens, and
style of a disk flower; the former laid open.
The details magnified.

3. Werneria villosa, sp. nov. (Tab. 1)

W. rhizomate repente; caule
florifero gracili simplici
usque ad capitulum parce
folioso villosa-lanato; foliis
angustissime linearibus pri-
mu villosis ^{trivibus} max. glabris,
summis filiformibus capita-
lum bracteantibus seu involu-
crantibus, radicalibus obtusis
deorsum ^{longe} attenuatis, basi dila-
tata ^{scariosa} intus fulvo-crinita; in-
vulcro 12-15-fido, lobis lineari-
lanceolatis margine scariosis;
ligulis exsertis; styli ramis ~~tran-~~
~~catis~~ apice truncato penicilla-
to-hispidis; achenio glabro.

Tab. High Andes of Peru
near Alparmarca.

Rhizoma horizontal and more or less creeping, rather slender, clothed with the decaying vestiges of the bases of leaves and their hairs, their extremity crowned with tuft of erect leaves, and extended into a ^{slender} flowering stem of two or three inches in length. The stem, young leaves, and inflorescence are clothed with lax and somewhat villous woolly hairs. Radical leaves one to $2\frac{1}{2}$ inches long, a line wide towards the obtuse summit, ~~thence~~ tapering downwards so as to become nearly filiform, then dilated into a scarious base or sheath, which is crinite with long and straight fulvous hairs (instead of implexed wool); the rather scattered cauline leaves linear-filiform,

(or subulate, (bract-like and
several of the uppermost) crowded
around the base of the head,
rather shorter than the involu-
cre. Cup of the involucre some-
what turbinate, 3 lines long, the
divisions 3 or 4 lines long, linear-
lanceolate, with broad ^{brownish or whitish,} scarious
margins. Rays numerous, linear,
(of uncertain color,) considerably
longer than the involucre.
Disk-corrals usually 10-nerved
in the upper part. Branches of
the style in the perfect flowers
linear, semicylindrical, glabrous
except at the edges near the top,
and at the broadly truncate sum-
mit, here bearing a tuft of short
hispid hairs. Achenia short-oblong,
glabrous. Pappus white, denticulate,
as long as the disk-corrals. Re-
ceptacle flattish, obscurely alveo-
late.

This should be compared with Nuttall's W. staticifolia, especially with the variety celmisioides (W. celmisioides, ~~Schult~~ Schultze, Bip.); but that, besides other differences, is said to have the branches of the style in the perfect flowers subulate, also papillose for their whole length.

Plate B. Neraria villosa; natural size. Fig. 1. Ray-flower. 2. Summit of its style. 3. A disk flower. 4. Its corolla, stamens, and style displayed. 5. Summit of ~~the~~ its style. The details variously magnified.

Gillies, ex
4. Wermeria pygmaea, ~~Hort. & Arn.~~

(Gillies, ex
Wermeria pygmaea, Hort. & Arn. in Jour.
Bot. 3, p. 348; Wedd. Chêl. & Arn.
1, p. 84.

W. Rhizoma, Kery in Gay, Fl.
Chil. 4, p. 215, t. 47.

W. minima, Walp. Rel. Merzen.
p. 27.

W. graminifolia, Benth. Pl. Hartw.
p. 211, non HBK.

W. brachypappus, Cherlerioides, & apic-
ulata, Schult. Bip. in Bonplan-
dia, ~~1856~~ 4, p. 53, 55.

Itab. Andes of Chili, at the
snow line, also of Peru near
Casma Cancha.

5. Werneria caespitosa, Wedd. 1

Werneria caespitosa, Wedd., Chlor.
And. 1, p. 83, t. 17.

Stat. High Andes of Peru
above Baños; in which region
it was long ago collected by Don-
bey, but only just now pub-
lished by Weddell. From the
character of the foliage I had
named it W. acicularis.

Plate B. Werneria caespitosa, Fig. 1. A leaf
enlarged. 2. Head enlarged. 3. A seta of the puppus magnified.

6. Werneria carnosula, Sp. Nov.

W. acaulis,
caespitosa, parva, undique
glabra; rhizomate crasso fere
lignoso ramoso; foliis confer-
tissimis linearibus vel spatula-
latis brevibus ~~line~~ integerrimis

15
obtusissimus carnosis capit-
ulum sessile vix aquantibus;
involucro 12-lobis, lobis tubo
parum brevioribus apice cili-
olatis, lineari-oblongis obtusis
apice ciliolatis; ligulis nullis;
achenis glabris; antheris luteis.

Hab. High Andes of Peru,
near Casa Cancha.

Plant apparently forming dense
tufts, only an inch high; the
leaves clustered on the summits of
the branches of thick rhizomata,
which bear no wool or hairs.
^{thick, apparently}
Leaves fleshy, glabrous, about 4 lines
long, those of sterile tufts spatulate,
the blade about a line and a
half wide, of the fertile tufts
linear, very obtuse, not narrowed
towards the base, the thin edges

of which are absolutely ciliate-denticulate. Head subsessile, 4 lines long. Involucre glabrous; the divisions rather shorter than the tube, of the same thick texture of the leaves. The ^(5 or 6) alternate exterior ones, ^{mostly} broader than the inner ones, which are linear and with scarious margins, which the exterior ones scarcely exhibit. Ovaries glabrous. ^{bonitas 10-nerved.} Branches of the ^{anthers yellow.} style smooth, except the abruptly truncate and minutely ~~seri-~~ hispid summit. Ovaries glabrous.

In most respects this accords so nearly with Weddell's N. melanandra, from the Bolivian Andes. But in the scanty specimens the leaves are ^{all} quite entire, the involucre not cleft beyond the middle, ^{and its} ~~and the~~ lobes of ~~it~~ all very obtuse, and the anthers yellow, not dark-colored in the least.

Mr. (Tab.)

7. Mermeria strigosissima, Sp. n.

W. caespitosa; rhizomate ^{ramoso} crasso
repente; foliis rosulatis brevi-
bus spatulatis integerrimis
capitulum sessile fulcrantibus
cum involucrio 10-14-fido stri-
gosissimus; ^{vaginae crispiflorae} ligulis ^{crinitis} exsertis;
stylis ramis ^{truncatis} apice hispidulo-
penicillatis et appendice seta-
cea auctis; achenio pubes-
cente; pappo rigidulo.

Hab. High Andes of Peru,
near Basa Bancho, ~~or Alpa-~~
~~marca~~

A depressed plant, rising
barely an inch above the surface
of the ground. ~~from the~~ Rhizoma
thick, branching, creeping, some-

what ligernous; the older parts
 clothed only with decayed vestiges
 of the bases of former leaves
 and with straight villous hairs.
 Leaves crowded in a tuft around
 the sessile head, which they
 slightly exceed, spatulate; the
 blade from 3 to 6 lines long, about
 2 lines wide, obtuse, perfectly
 entire, tapering gradually into
 a short or sometimes elongated
 petiole, both faces thickly clothed
 with long and straight, flattish,
 tapering, rigid bristles or rather
 strigae. These remarkable bris-
 tles are a line or two in length,
 sordid or fuscous, and themselves
 denticulate under a lens, or ^{the tissue of} some
 of the more rammentous ones ~~like~~
~~resolving~~ ^{above} into slender hairs.
 Involucre about 4 lines long,

(The dilated base of the leaves is beset with similar, but
 more slender bristles or long villous hairs.)

campanulate, externally hispid
with bristles like those of the leaves
but less stout, cleft about to
the middle into 10 to 14 lan-
ceolate lobes, their edges scarcely
at all scarious. Receptacle
naked? Rays exerted (their
color not recorded), a narrow an-
nulus ~~in~~ connects the linear-
oblong ligule with the slender
tube. Disk-corollas narrow, 5-
nerved, the lobes short-linear.
Branches of the style of the
disk-flowers glabrous or nearly
so except at the ^{absolutely} truncate
summit, which is penicillate
with short and rigid bristles and
furnished with a setaceous ap-
pendage or stiff pointed bristles,
which is ~~often~~ sometimes decide-
ous or perhaps obsolete. Achenia
short, minutely silky-pubescent,

Pappus copious, ~~the~~ equalling and afterwards exceeding the corolla of the disk, composed of more rigid or ^{stouter} ~~coarser~~ bristles than ~~is~~ in other species.

A most remarkable species, apparently somewhat related to Weddell's W. glandulosa; to the peculiarity of the style we have an approximation in ~~the follow-~~
~~ing species~~ W. the following species.

Plate A. Verneria strigosissima; natural size. Fig. 1. A leaf enlarged. 2. One of the branching hairs magnified. 3. Involucre laid open. 4. A ray-flower. 5. Summit of its style. 6. A disk-flower. 7. A disk-flower with full-grown achenium. 8. Summit of the style of a disk-flower. 9. Section of the achenium. The details variously magnified.

8. Werneria ciliolata, Sp. Av.

W. caespitosa, ramosissima, de-
pressa, glaberrima; ramis ^{brevibus} con-
fertissime foliosis; foliis ~~subcar-~~
~~mosis~~ (saepe oppositis) lineari-
bus subcomplicatis vel canalic-
ulatis acutiusculis subcar-
mosis sub lente spinuloso-cil-
iolatis; capitulis sessilibus;
involucri cylindraceo pluri-
costato 8-⁹-fido, lobis trian-
gulato-lanceolatis obtusis
subscarios, costa valida;
ligulis paucis brevibus;
stylis ramis truncatis apic-
ulo brevi vel obsoleto; achenis
glabris.

Tab. High Andes of Peru,
~~with the foregoing~~ and succeeding
 at Alparmarca.

Plant with the habit of the following, but with slenderer stems, ^{or branches,} apparently not so fleshy, and only an inch or two in length, the older ones naked and free from wool or hairiness, as is the whole plant. It probably forms matted tufts on the surface of the ground. The numerous and crowded branches are thickly clothed with leaves. These are many of them opposite with their ^{more or less ciliate,} scarious, but not vaginate. They are about half an inch long, and ^{about} ~~less than~~ a line wide at the base, slightly narrowing to the apex, thickish and apparently somewhat fleshy except ^{near} ~~at~~ the base, a strong midrib prominent beneath, the upper surface more or less channelled, the edges thin and sharp.

and ciliate with minute and salient spinulose denticulations. ^{terminating the branches,} Heads slightly exserted from among the leaves. Involucre 4 lines long cylindraceous-campanulate, ribbed with about 24 ~~salient~~ salient nerves, of which those which form the axis of the lobes are the stronger, cleft less than half way down into ^{or sometimes 8,} broadly lanceolate, or somewhat triangular, but obtuse, lobes; ~~their~~ ^{the} which are thin and somewhat scarious or petaloid (yellowish?) except the axis or strong midrib. Receptacle flattish, naked. Ligules apparently about 8, short, in the scanty specimens not exceeding the involucre. Disk-collars 5-nerved. Branches of the style (in the ray-flowers mostly simi-

lar to those of the disk) truncate and somewhat capitate at the summit, ~~where they are~~ which is minutely hairy, also pointed with a minute apiculation, which, however, is often obsolete. Achromia perfectly glabrous. Pappus soft, denticulate.

Plate

A. Mormonia ciliolata

natural size. Fig. 1. Upper ~~side~~ face of a leaf. 2. Lower face and section of the same. 3. The style. The details magnified.

9. Wernneria digitata, Wedd.

W. caespitosa, ramosissima, car-
nosa; ramis adscendentibus
superne confertissime foliosis
glabris; foliis glabriusculis apice
(limbo) cuneato-dilatatis trifidis,
laciniis crassis conglomeratis lin-
earibus oblongisve integris vel
~~2-3-fidis~~ 2-3-lobatis primum
parce lanatis; capitulis sessil-
ibus radiatis; involucrio can-
panulato 13-20-fido, lobis line-
ari-lanceolatis margine denticu-
osis; styli ramis apice penicil-
latis et appendice setacea saepe
saepe auctis; acheniis glabris;
receptaculo valde convexo nudo.

Wernneria digitata, Wedd. Chla.
Ind. N. p. 86, t. 17.

Stat. High Andes of Peru
at Alpanmarca.

A scanty specimen of this interesting species was collected, along with the following and the preceding. It appears to be Noddell's W. digitata, but with some minor discrepancies. The leaves bear some woolly hairs, their lobes are somewhat incrassated, though ^{far} less so than in the following species and are very blunt instead of acute. Some few of the leaves appear to be truly opposite. The involucre is ciliate or nerved as in W. ciliolata, but less conspicuously; the divisions in our specimens are fewer than in Noddell's, and are scarcely if at all longer

than the tube. The disk-corrals
are 10-nerved. The branches of
the style, as well in the ray
as in the disk flowers, sometimes
bear ^{conspicuous} a slender, setiform appen-
dage (either naked or ~~with a few~~
~~sparingly~~ ~~thence~~ setulose); some-
times this is ~~was~~ obsolete or not
distinguishable from the coarse ~~thence~~
hairs of the truncate-obtuse sum-
mit.

(ylla, Schultze, Bip.
10. Thermeria dactylophylla, (Tab.)

Th. dense caespitosa, ramosissima,
carnosa; ramis adscendentibus
fasciculatis; foliis in apice
ramorum creberrime imbricatis
~~exlus~~ ^{supra} lanatis mox glabratis
parvis apice sen limbo
cuneato-dilatatis trifidis,
laciniis 2-3-lobatis ^{valde dentatis}, lobulis
valde incrassatis obtusissimis
conglomeratis; capitulis semilibus
radiatis; involucro campanulato
10-15-fido, ~~laciniis~~ lobis oblongis
lanceolatisve marginibus scariosis,
stylo praecedentis; acheniis ^{valde costatis} glabris;
receptaculo planiusculo
~~eximie~~ alveolato!

Thermeria dactylophylla,

Schultze, Bip. in Bomplandia
4, p. 53; Medd. ~~Chlor~~ Chlor. And. 1, p. 87.

29

Stat. High Andes of Peru at
Alpamarca.

This extraordinary species was first detected by Donkey in the Peruvian Andes, doubtless in the district visited by the naturalists of this Expedition. Gay and Sechler have ^{collected} detected it farther south, and Pentland on Illimani in Bolivia. Like Dr. Schultz, I also ^{was} ~~was~~ disposed, ^(long since) to view it as the type of a new genus (and to dedicate it to the rival geologist, the founder of the Plutonic theory), regarding it as ~~the~~ sustaining to Gynoxys the relation which Mermeria does to Senecio. But ^(appearance of the) the style, as will be seen is inconstant and variable, and the alvolute receptacle is wanting in the nearly related N. digitata.

(Several of
 In our specimens the receptacle
 is not only profoundly alveolate,
 but the alveolae are irregularly
 extended, here and there among the
 flowers, into scarious fimbriae,
 some of them half the length of
 the disk-flowers. But in a
 head from one of Donkey's speci-
 mens which I have been ena-
 bled to examine, the receptacle
 is only moderately alveolate.
 Disk-collas ^{either} ~~only~~ 5-nerved ^{10-nerved} or
 Achenia cylindraceous, strongly
 costate with several salient ribs.

Plate B. Mermeria dactylo-
phylla: two forms. Fig 1. Upper face
 of a leaf. 2. Summit of another leaf, with
 the lobes more incurved. 3. Head. 4. Re-
 ceptacle, deeply alveolate. 5. A disk-co-
 lla ~~expanded~~ laid open. 6. Style. 7, 8.
~~Anther~~ Stamens. 9. Leaf of the lower form dis-
 played. 11. Ray-flower, and 11, disk-flower of the same.

12. Corolla and stamens of the latter displayed. 13.
Style ^{from} the same. The details variously magnified.

Bulcitium, Humb. & Bonpl.

1. Bulcitium Magellanicum, Humb.
& Jacquinot.

Bulcitium Magellanicum, Humb.
& Jacquinot, Voy. Pole Sud, Bot.
t. II, p. 10; Hook. f. Fl. Antarctic. 1,
p. 312.

Senecio Magellanicus, Hook. & Arn.
in Jour. Bot. 3, p. 343.

Hab. Orange Harbor, Fregia.

2. Bulcitium Staenkei, Wedd.

Bulcitium Staenkei, Wedd, Chlor.
And. 1, p. 139.

Hab. High Andes of Peru, above

Baños, near Alparamarca, Ys. Also
collected in Peru by Mr. McLean.

This well accords with the
character given by Weddell. It
differs from C. nivale in the as-
signed particulars (except that the
revolution of the margins of the
leaves, or the want of it, affords
no valid discrimination), also
in a disposition to the branching
of the ~~flowering~~ stems above,
and its commonly bearing two or
^{even in specimens only three or four inches high}
three heads. x C. nivale is not
nearly diccephalous.

3. Culcitium longifolium, Turcz.

Culcitium longifolium, Turcz. in
Bull. Soc. Nat. Mosc. 24, p. 206;
Müll. Ann. Bot. 5, p. 296; Wedd.
Senecio ^{l.c.} culcitiorides, Wedd. l.c. p. 163.

Var. β . tenue: foliis tenuioribus;
scapo gracillimo subpedali
bracteis paucis subulatis instruc-
to 3-4-cephalo; capitulis mi-
noribus.

Ital. High Andes of Peru
near Casa Blanca. Var. β . above
Baños.

The large specimen is the
same as a plant of Prof. Jameson's
collection, ~~apparently that~~ on
which Turczaninow founded his
C. longifolium. I cannot doubt
it is likewise Weddell's Senecio
culcitoides. Admittedly there is
no ~~good~~ ^{distinct} line of demarcation be-
tween the two genera; but this is
surely a congener of C. rivale
and ^{in the involucre} is as good a culcitum as
is C. adscendens.

hardly more than
The variety tenue is a much
attenuated and depauperate form
of the species; the leaves not rigid,
the glabrate stem almost leafless
and filiform; the heads ^{rather} ~~one third~~
smaller.

4. bulcitiun humile, DC.

bulcitiun humile, DC. Prodr.
b, p. 325.

Senecio Candollii, Wedd. Chel.
And. 1, p. 166.

Stab. High Rides of
Peru, at Alpan area.

The leaves are sometimes quite
entire and often spatulate or incli-
ned to obovate. ^{The scape varies from half an inch to three inches in length.} The species cannot
well be generically separated from the
two preceding and their immediate
relatives.

Senecio, Lin.

* Patagonici et Fregeani.

1. Senecio subulatus, Don.

Senecio subulatus, Don. ex
Hook. & Arn. in Jour. Bot. 3, p.
330.

Stat. Sand-hills of the Mouth of
the Rio ^{Aguero} ~~Grande~~, North Patagonia;
the varieties elativ and macrantha.

Stems shrubby at the base.
Leaves fleshy, subulate-linear,
pointed, mostly entire, sometimes
trifid or sparingly pinnatifid. Heads
pretty large; the ligules little ex-
serted. Achenia minutely cinereous;
the short hairs when moistened emit-
ting a couple of spiral threads, as

in many other species, and then
when dry appearing velvety or
downy, — a point to be kept in mind
in collating the descriptions of various
Senecios. ~~S. leptostachys HB. and~~
~~S. pinnatus, Poir. (bineraria Mega-~~
~~planica, Sprag.) are probably states~~
~~of this same species with more~~
~~pinnate leaves.~~

2. Senecio albicanlis, Hook. & Arn. l.c.

Ital. Rio Negro, North Patu-
gonia, with the preceding.

3. Senecio Arnottii, Hook. f. ^{dentatus.} var.)

Senecio Arnottii, ^{S. longipes.} Hook. f. Fel. —
Antarct. 2, p. 314.

S. limbarioides, Hook. & Arn. Jour. Bot. 3, p. 347.

Ital. Orange Harbour, Truena.

This has narrowly linear or lanceolate leaves which are sharply 2-4-toothed ^{ascending stems, and} towards the summit, or some of them entire, pedicels an inch or two in length, and is intermediate between Dr. Hooker's S. Arnottii and S. longipes, which he rightly conjectured to be only varieties of the same ~~plant~~ species. The var. longipes was collected by Gunnison.

4. Senecio leucomallus, Sp. Nov.

S. fruticosus, ramosus, undique albo-lan^{osissimus}~~atus~~; ramis 1-3-ceph-
alis ad apicem usque foliosis;
foliis spatulatis ^{obtusis planis} integerrimis
(denudatis glabris avernibus); capit-
ulis breviter pedunculatis; invo-
lucro lanosissimo, bracteis
^{linearibus} subulatis squamis propriis sub-

Aequantibus; ligulis nullis; acheniis glaberrimis.

~~Var. β .~~

Var. β . incisus; caulibus laxis,
ascendentibus; foliis plerisque
apice 3-5-lobatis vel inciso-dentatis.

Stat. Orange Harbour, Tasmania.

This is related to S. Patagonicus, Hook. & Arn. (of which S. Andersonii, Hook. f. and S. Dargausii, Hook. & Jacq. are forms), but is very densely ^{and brightly} white-woolly, has larger heads, short peduncles, obtuse and spatulate or somewhat cuneate leaves, &c. When the dense wool is detached, the leaf is left glabrous and veinless; when alive perhaps ^{rather} fleshy. ~~It may well be Strabo and Strabo~~

5. Senecio candidans, Db.

Senecio candidans, Db. Prodr. 6,
p. 412; Stork. f. Fl. Marten. 2,
p. 312.

Cacalia candidans, Vahl, Symb.
3, p. 96, t. 71.

Stat. Good Success Bay, and
Orange Harbour, Tonga.

6. Senecio Smithii, Db.

Senecio Smithii, Db. Prodr. 6, p.
412; Stork. f. l. c. p. 316.

S. verbascifolius, Stork. & Jacq.
l. c. t. 12.

Bineraria gigantea, Smith, Ext.
Art. 2, p. 11, p. 65.

Chrysanthemum verbascifolium,
Common. in Stat. Mus.
Bar.

Itab, Orange Harbor and
Good Success Bay, Zuegia.

This stately plant has much
the aspect of the preceding, except
that the leaves are mostly
more oblong, and the rays are
present. These are ochroleucous
or almost white and commonly
conspicuous, but in some speci-
mens very short, as mentioned by
Dr. Hooker. The corymb can be
called 'oligocephalous' only in de-
pauperate specimens; in the larger
ones it bears as many as forty
or fifty heads. The larger petioles
are naked above; the others are
broadly wing-margined.

Jacq.
7. Senecio acanthifolius, Humb. &
Senecio acanthifolius, Jacq. Bot.
Humb. &

Voy. Pde Ind. t. 11, Hook. f. l. c.
p. 318.

Stat. Orange Harbour, Fregia

A less succulent form of this well marked species than that characterized by Dr. Hooker; the leaves of rounder outline, rather retund cordate-ovate than oblong-ovate; the lower petioles sometimes five or six inches long and with one or two ^{small} lateral appendages, above the middle, ~~the numerous heads of~~ ^(or rarely few) ~~the compound~~ ~~considerably smaller~~ The subcapitate-truncate tips of summit of the branches of the style bear a subulate apiculation.

Plate

8. Senecio Websteri, Hook. f.

Var. β . subdiscoidens: ramis adscen-
dentibus; foliis flabellatis grosse
crenato-dentatis, basi nunc
truncata nunc ^{late} cuneata; li-
gulis paucis parvis tubo bre-
vioribus.

Stat. Orange Harbour, Jamaica.

This is probably a variety of
Dr. Hooker's S. Websteri, founded on
a single and insufficient specimen
from Staten Land. The stems are
much branched, apparently spreading
or declined, a foot long, the ~~basal~~
branches ascending, the older
parts glabrate, the younger, like the
petioles and the lower face of the
leaves, clothed with a loose, areolose

wool. The leaves, though thin in the dried specimens, were evidently succulent. They are mostly a little broader than long, less than an inch in diameter, faintly flatulate-ly veined, either truncate or very broadly cuneate at the base (but none of them cordate), three entire, the rest of the circumference cut into from five to 8 coarse and blunt teeth or crenatures, the upper surface glabrous, the whole margin revolute. Petiole about the length of the blade, slender. Heads few in a short and nearly sessile cluster. Involucre campanulate, 3 lines long, scarcely bracteolate; the scales lanceolate, acute. Ray-flowers several, not exceeding the disk; the ^{abortive} ligule not half the length of its tube, shorter than the styles, truncate. Branches of the style of the

disk. flowers capitulate, Achenia
glabrous.

9. Senecio Darwinii, Hook & Arn.

Senecio Darwinii, Hook. & Arn.
in Jour. Bot. 3, p. 333; Hook. f.
Fl. Antarctic. 2, p. 317.

Var. β . eradiatus: humilis, con-
densatus; foliis parvis; ligulis
nullis.

Senecio Laseguei, Humb. & Jacq. l. c. t. 13³ ex tab.

Tab. Orange Harbour, Fruegia.

The specimens represent various,
more or less condensed forms; among

which the most condensed, ~~and~~
smallest-leaved, and most glabrate
specimens want the rays. I
cannot think them specifically
different from the others.

10. Senecio Eightsii, Hook. & Arn.

Stat. Good Success Bay, Fregia,
the variety of Dr. Hooker (Fl. Antares,
l. c.), with lax or decumbent stems,
more leafy flowering branches, short-
peduncled heads, - in fact the
more luxuriant state of the
species. Also, perhaps, a form
of S. Darwinii, ^{among a thousand others,} and a good case ^{to}
appeal to in favor of the Darwin-
ian hypothesis of the differentiation
of species through variation and
natural selection.

11. Senecio trifurcatus, Less.

Senecio trifurcatus, Less. Sm. p.
341; DC. Prodr. 6, p. 435; Hook. f.
Fl. Antarc. 2, p. 317, t. 108

Jussélago trifurcata, Forst. in
Comm. Gött. 9, p. 38

Senecio Magellanicus, Forst. in
herb. Mus. Par.

Bellis foliis apice incisis, Com-
m. in herb. Mus. Par.

Stab. Orange Harbour, Fuzgia.

This is well figured by Dr.
Hooker, who has represented a young
stolon on one specimen. These stolons,
although not mentioned in any published
description, are sometimes very conspic-
uous. They occur in one of Comm-
erson's specimens. The scape is from 2 to 5,
or in one specimen 9, inches high.

** Chilenenses.

12. Senecio sinuatilobus, Dec.

Hab. Coast of Chili, in the vicinity of Valparaiso.

13. Senecio glaber, Less.

Hab. Near Valparaiso and Santiago, Chili.

14. Senecio Bridgesii, Hook. & Arn.

Hab. Chili, in the vicinity of Santiago. Flowers ⁽²⁰⁻³⁰⁾ and scales of the involucre more numerous than the character assigns; differs from the foregoing mainly in the glabrous achenia.

15. Senecio fistulosus, Paepp.

Senecio fistulosus, Paepp. bot. Chil.
p. 230; Less. in Linnaea, 6, p.
246, non DC., certe non
Remy in Gay Fl. Chil.

S. truncatata, Bert. bot.; DC.
l.c. p. 417; Hook. & Arn. in
Journ. Bot. 3, p. 340; Remy in
Gay Fl. Chil. 4, p. 194.

Hab. Chili, in the vicinity
of Santiago.

16. Senecio Bustillosianus, Remy.

Senecio Bustillosianus, Remy in
Gay, Fl. Chil. 4, p. 155.

S. aizoides, Hook. & Arn. ined. in
Hort. Hook.

Hab. Chili, in the first Cordillera

above Santiago: with some
incomplete specimens having
entire and linear leaves and
rather ~~small~~ smaller, subst-
itany heads, which may be
S. Lastarrianus, Kemy.

17. Senecio Monttianus, Kemy,

Senecio Monttianus, Kemy in
Gray, Fl. Chil. 4, p. 158; Wedd,
Chlor. And. 1, p. 120.

S. glandulosus, Don ined. in
Hort. Hook.

Hab. Andes of Chili, on the
first cordillera above Santiago.

A well marked species; the
branchlets, &c. beset with rigid
glandular points; the involucre thick;

glandular; but the scales fewer than the character assigns, only seven or eight in our specimens.

*** * Peruviani.

18. Senecio volubilis, Hook.

S. fruticosus, scandens, glabrescens;
foliis membranaceis oblongo-
ovatis cordatisve crenato-denta-
tis vel repandis subtus nunc
villosulis seu tomentisculis,
petiolo longiusculo nudo
vel supremum basi aurito-dil-
atatis; corymbis axillaribus et
terminalibus subpaniculatis
laxis; involucrio glabro parce
calyculato 8-12-phyllo disco
breuiore; ligulis 5-7; fl. disci 18-
20; achenio puberulo.

Senecio volubilis, Hook. Bot.
Misc. 2, p. 226.

Stat. Near Callao, Peru.
Collected also by Donkey and by
Matthews.

Leaves 2 or 3 inches long, thin.
Auricles of the petioles, when
present, small, more or less toothed.
Heads half an inch long. Flowers
yellow.

~~19. Senecio tephrodes sp. nov.~~

~~S. herbaceus~~

19. Senecio subaltissimus, ^{candidus}, Sp. Nov.

S. herbaceus vel basi frutescens,
laxe arenoso-lanatus; caule
mox glabrato ^{sesquipedali} erecto apice
corymboso; foliis membranaceis,
^{caninis} oblongis ovato-subcordatis vel
subdeltoides grosse duplicato-
dentatis ^{crenatisve} ~~obtusis~~ supra gla-
bratis subtus tomentoso-inca-
nis, petiolo saepius alato;
capitulis in corymbo 3-9 longe
pedicellatis; involucro circiter
20-phyllo glabrescente (squamis
linearibus) basi bracteolis brevibus
suhulatis parvis calyculato; li-
gulis elongatis; acheniis sericeo-
puberulis. - Indit foliis sinu-
atis et in

Var. β. minor; caule subaphyllo
oligocephalo; foliis lyrato-pin-

ratifidis sen pinnatifid-
tis, petiolo basi sepius
stipulato - appendiculatis.

(Andes of
Hab.) Peru, in the vicinity
of Obrajillo. Also collected ~~at~~
on the crest of Puruchuca
by Matthews, and in some
part of Peru by Pavon.

Plant a foot or two high;
the stems perhaps a little woody
at the base, mostly branched,
the areolae wool Caducous, then
glabrous, terete, faintly striate,
basal leaves 2 or 3 inches in
length, including the petiole, only
the uppermost sessile, varying
from deltoid-subcordate to oblong,
obtusely or sometimes acute,
A Coarsely and doubly crenate-toothed,
sometimes sinuate-incised and
rather gradually contracted at the

base into the toothed or lobed
wing of the Petiole, but mostly
abruptly contracted into an entire
wing or margin, which is scarcely
if at all dilated at the base;
the upper surface glabrous or
nearly so; the lower whitened
with a close areolose tomentum,
bryanth naked. Pedicels, an
inch or two in length, ^{glabrous, except the floccose deciduous wool} bearing
a few setaceous bracts. In-
volucre cylindraceous, half an
inch long, the appressed caly-
ulate bractlets only one or two
lines long. Flowers yellow.
Ligules linear, 5 lines long. Disk-
flowers about 40; branches of the
style capitate-truncate. Ova-
ries silky, cinereous. - The var.
β. ~~is an~~ has simple and more
naked stems, the smaller only
six inches high, more hoary (but

younger) heads, and pinnatifid
lower leaves, mostly with stipuli-
~~form~~, roundish and incised or
~~toothed~~ ~~opposed~~ stipuliform ap-
pendages at the base of the petiole.

20. Senecio gracilipes, Sp. Nov.

S. herbaceus, ^(puberulus) ~~puberulus~~,
caule erecto simplici pedali
parce foliato, ^{oligocephalo} foliis gracillime
petiolatis membranaceis, in-
ferioribus longissime graciliter
petiolatis ovatis subtruncatis
sinuato-5-7-lobatis lobis dentic-
ulatis, superioribus parvis pau-
cis pinnatifidis petiolo basi
aurito-dilatatis; capitulis lin-
gineis pedunculatis disci-
deis; involucri parce ~~bract~~
calycis bracteolis setaceis

Calyculato 20-phylo, squamis
lineari-lanceolatis dorso hirtellis,
achenis minutim hirtellis.

Stat. Andes of Peru, in the
vicinity of Obrajillo.

Stem simple, ~~from~~ 6 to 16
inches high from a perennial root;
The larger ^{plants} bearing 3 or 4 carline
leaves having slender petioles of
about four inches in length, the
lamina 2 or 3 inches long and about
2 inches wide, pinnately 5-7-lobed
or sinuate, ^{and} _p nearly truncate at the
base. Above the smaller specimens
are leafless, the larger bear one
or two ~~and~~ smaller or reduced
leaves, the petioles shorter and
annulate-dilated at the base.
Heads 3 to 5; peduncles an inch

or two in length, naked. Involucres 7 ~~times~~ or 8 lines long; the scales linear-lanceolate carinate towards the base, beset with small, ^{short,} crisped or jointed hairs, ^{or weak bristles,} like those of the stem and foliage, but more conspicuous. Rays none. Disk-flowers 50 or more. — A well-marked new species; but the specimens are poor and scanty.

21. Senecio Myoseridifolius, Wedd.

Senecio Myoseridifolius, Wedd.,
Chlor. And. 1, p. 108.

Hab. Near Baños, Andes of Peru; a polycephalous specimen, and near Casa Blanca in the high Andes; a dwarf, ~~state~~ monocephalous form, only a span high. Mr. Matthews also collected this species near Pasco.

22. Senecio Richii, Sp. Nov.

S. herbaceus, glaber; caule erecto gracili apice corymboso polycephalo; foliis angustissimè linearibus plerumque laciniatis vel pinnatipartitis; capitulis parvis discorideis pedicellatis; involucrio parce minutissime bracteolato 12-13-^{obtusiusculis;} phyllo, squamis lanceolatis acheniis hirtellis.

Var. β ? foliis latioribus, lobis lanceolatis; caule paleo ^{floridis} ramis patentibus.

Stat. Andes of Peru, in the vicinity of Obrajillo.

Base of the stem unknown,
probably wholly herbaceous.

The specimens consist of the
upper part of two flowering
stems, over a foot in length, slender,
leafy to the summit, where it di-
vides into a loose ^{and wide} corymb.
Leaves not dilated at the base,
nor distinctly petioled, one or two
inches long, sparingly pinnatifid
or the smaller ones entire, the
rachis and the ^{short} segments at most
a line and a half wide, often much
narrower and almost filiform.
Pedicels 6 to 16 lines long, slender,
minutely bracteate at the summit.
Involucre barely 3 lines long, shorter
than the disk, glabrous, as is the
whole plant, the calyculate bract-
lets few and very short. Flowers
between 40 and 50, yellow. Ovaries

minutely hairy. — ^(doubtful) The variety
is the summit apparently of a coarser
~~plant~~ and more branched plant
with broader leaves. It was,
I believe, collected likewise by
Matthews at Calluani, and is
probably ~~of a different sp.~~ dis-
tinct.

23. Senecio collinus, DeC.

Hab. Andes of Peru in the vi-
cinity of Obrajillo. Also gathered
near Pasco by Matthews.

~~24. Senecio Matthewsii ^{var.} Widd.~~

~~Hab. Andes of Peru~~

24. Senecio flaccidifolius, Wedd.

Senecio flaccidifolius, Wedd. Chlor.
And. 1, p. 113.

Stat. Andes of Peru in the
vicinity of Baños. (Not wholly
conformed to the character, but probably
of this species.)

25. Senecio adenophylloides, Schultze
(Bip.)

Senecio adenophylloides, Schultze,
Bip. in Bourplandia, 4, p. 55; Wedd.
l.c.

Stat. High Andes of Peru at
Alpamarca or near Baños. A
low ~~shrubby~~ suffrutescent plant.

26. Senecio spinosus, DC.

Hab. High Andes of Peru, between Baños and Alpuamarca.
(Well described by Weddell, l.c.)

27. Senecio Pickeringii, Sp. Nov.

S. fruticosus, ramosissimus, glaber;
ramulis brevis rigidis, flo-
riferis capitula 1-3 subpedi-
cellata sepius mutantia gerenti-
bus; foliis crebris linearibus
sen linearibus oblongis sessilibus
subcarnosis grosse pinnati-
fido dentatis variusve integris;
bracteolis calyculi ovatis sen
obovatis ^ Squamis involucri ⁽¹⁰⁻¹²⁾ late oblan-
gis tertia parte triente brevior-
ibus; ligulis nullis; achenis.

glabris; pappi setis barbel-
latis.

Var. β .? foliis minus carnosis
magis incis; ^{capitulis minoribus;} ~~involucris~~ brac-
teolis squamisque involucri
angustioribus.

Stat. High Andes of Peru, be-
tween Casa Bancho and Bullmai.
Var. β . Near Baños.

A low, rigid shrub, totally
glabrous, ^{(crowded, thick,} with more or less fleshy,
short leaves (half or three quar-
ters of an inch long), and nodding
heads (4 or 5 lines long) either solitary
or usually ~~cross~~ clustered at the
extremity of the short and spread-
ing branchlets. The species is re-
markable for the ^{ample} calyculate scales,
which are several in number, re-

markedly broad, ovate or some-
times obovate, thin in the dried
specimens (perhaps rather fleshy
when fresh) with scarious and
somewhat erose-denticulate mar-
gins, a little shorter than the
^{proper} involucral scales into which
they seem to pass. The latter
are similar in texture and ap-
pearance, but ~~thinner~~ more
scarious, and oval or oblong, very
obtuse, as long as the Disk.
Flowers 40 or 50, all herma-
phrodite. Achenia perfectly gla-
brous. Pappus of slender and
almost barbellate bristles. The
calyculus in size and form re-
sembles that of Middell's S.
glacialis; but the proper scales
of the involucre are much
broader. Indeed the whole might
well be described as an imbrica-

ted involucre. — The materials
of the variety are insufficient;
the narrower scales of the inv-
lucre and its calyculus appear to
separate it, but there is ^{an inter-} ~~a trans-~~
^{mediate} ~~transary~~ specimen.

28. Senecio Danäi, sp. nov.

S. suffruticulosus, ^{caespitoso-} depressus, gla-
bratus; foliis crebris carnosulis
linearibus ~~sterisque~~ inciso-3-5-
dentatis subpinnatifidis vel in-
tegerimis primis cum caule
~~lanulosis~~ apice subaphyllo
monocephalo lanulosis; capit-
ulo mutante disciideo; involu-
cri squamis 14-16 lato-line-
aribus obtusis cum bracteis
calyculi dimidio brevioris

Dorso
(nigro-pubescentibus; acheniis
glabris cinereo-puberulis.

Stab. Alpamarca, in the
high Andes of Peru.

Stems depressed and branching,
apparently forming matted tufts
on the surface of the ground, the
flowering summits ^{ascending} ~~rising~~ to the
height of one or two inches.
Leaves 3 or 4 lines long, crowded,
or rather scattered on the flower-
ing shoots. Thickish, at first
thinly woolly-pubescent, as is
the stem, soon glabrate, ap-
parently a little viscid, mostly
bearing a few short and blunt
teeth or lobes. Head single ~~and~~
or rarely a pair, nodding, on the
slender and pedunculiform sum-
mit of the stem, 5 or 6 lines long.

about 60-flowered; the involucre
and the few and lax lanceolate
bractlets villous-pubescent with
~~dark-colored~~ blackish and
somewhat glandular hairs, at
length rather glabrate. Achenia
minutely hoary-pubescent. -
A well-marked alpine species;
dedicated to the distinguished Geolo-
gist of the Expedition.

29. Senecio nummiformis, ^{Schultz Bip.} ~~Wedd.~~

Senecio nummiformis, ^{(Schultz Bip. l.c.;} Wedd.,
Chlor. And. 1. p. 104, t. 19.

Stat. High Andes of Peru
at Alparamarca. + - l - + - l - + - c +
+ + + +. A very depressed, caespitose spe-
~~cies~~, plant, agreeing with the typical
form characterized by Weddell, but

with the involucre about 10-leaved,

30. Senecio evacoides, Schultz Bip.

Senecio evacoides, Schultz Bip.
in Bonplandia, 4, p. 52;
Nodd. Chlor. And. 1, p. 105.

Stat. High Andes of Peru at
Alpamarca and Casa Cuncha. Also
collected in the Peruvian Andes by
Matthews and by L. Hb. — Our
specimens well accord with the char-
acter except that the bristles of the
pappus are indistinctly if at all
barbate at the apex.

31. Senecio dictinus, Nodd.

Senecio dictinus, Nodd. Chlor.
And. 1, p. 107.

Stat. Between Casa Blanca
and Bulluay in the high Andes
of Peru.

The female plant of this
species, which only was known to
Noddell (from ~~a~~ specimens collected
by Dombey) ~~also occurs is preserved~~
was also gathered in the Peru-
vian Andes by Melian (in herb.
Hort.). Our own very scanty
specimens comprise both sexes, or
subsexes, for the female flowers have
imperfect anthers, ^{and} the ~~female flowers~~ ^{staminate}
a pistil like that of the female,
only the branches of the style are
minutely papillose-hairy external-
ly, as in ^{Noddell's} *S. iodopappus*. The
~~female~~ style in the female flowers,
instead of resembling those of the
hermaphrodite blossoms of *Senecio*
generally, ~~are~~ imitate those of the

ray-flowers of this genus. The male heads are rather broader than the female ones, and the anthers are exserted. From analogy we should expect this tendency towards a separation of the sexes in every degree; and Noddell is doubtless ~~right~~ right in ~~retaining~~ placing this species, with his S. Antennaria, in Senecio. I add the following to the group, although the indications of missexuality are less pronounced.

32, Senecio pellitus, sp. nov.

S. nanus, herbaceus, succulosus,
acaulescens, indigne pilis
longis sericeis dense crinitus;

(vel subrotundis
foliis rosulatis obovatis) integer-
rimis sub-3-5-nerviis in peti-
olum brevem attenuatis; scapo
~~laevi~~ brevi vel subnullo mono-
cephalo; involucri 20-phyllo e-
calyculato; ligulis nullis;
floribus ~~subhermaphroditis~~ cre-
berrimis; styli ramis obtusis
(nec truncatis) hirtulis; ache-
nis glabris; pappo rigidulo.

Stat. High Andes of Peru,
near Casa Blanca.

Creeping rootstocks or stolons
slender, bearing at their summits
a rosulate tuft of leaves, their
blade half an inch long and
almost as wide, obtuse, entire,
obscurely 3-5-nerved, densely clothed,
as is the involucre, &c., with a
coat of long, straight, soft and

silky-villous, somewhat appressed, fulvous hairs, the base abruptly contracted into a short petiole. Head sessile, or raised on a scape of less than an inch in length and bearing one or two linear leaves or bracts. Involucre 6 to 8 lines long, shorter than the disk; the scales about 20, linear-lanceolate, with scarious margins, very silky-villous ~~on the base~~ externally. ~~Disk~~ corolla with a slender tube and a somewhat elongated throat, which is sparingly beset toward the ~~base~~ base with some pilose hairs. The flowers are structurally hermaphrodite in the specimens; but the anthers seem to be imperfect, ^{though they bear some pollen.} The branches of the style, like those of the preceding species,

are compressed and obtuse, not truncate, capitellate, or at all appendaged at the summit, the outer face minutely hispid for nearly the whole length. Pappus white, rigid for a series, the bristles gradually thickened at the base, copious, in two or more series, longer than the flowers, half an inch in length.

33. Senecio aracholomus, Nutt. ^{l.c.?}

Hab. Andes of Peru near Baños; an insufficient specimen which may doubtfully be referred to this species.

34. Senecio macrohizus, Ned.^{l.c.}

Stat. Alpanmarca in the high Andes of Peru. - Insufficient specimens, allied to S. pilatus, but the foliage glandular-villous, with some lax deciduous wool beneath, the involucre nearly glabrous and gamophyllous at the base. The same plant, I believe, was gathered at Pasco by Matthews (no. 648, in herb. Hook.).

35. Senecio repens, St., var. taraxiifolius.

Stat. High Andes of Peru, near Cava Cancha.

The scanty and poor specimens so nearly accord with S. repens, &

the Andes farther north (which is well illustrated by Weddell), that I can regard them only as forms belonging to a variety of that species with irregularly and deeply pinnatifid leaves, which apparently are not so rosulate and smoother,

Tab. . .)

36. Senecio wernerioides, Wedd. (1

Senecio wernerioides, Wedd. Chlor.
And. 1, p. 128, t. 19.

Var. β . exscapus: capitula inter folia
rosulata sessili creberrime pin-
natifido-dentata sessili.

Var. γ . scaposis: scapo multibracte-
ato folia spatulata simpliciter
dentata subaequante.

Stat. High Andes of Peru:
var. β , at Alparmarca, V. Between
Culluani and Obajillo.

This well-marked species has
recently been published and figured
by Meddell, on his specimens, col-
lected in the Andes of the southern
part of Peru, which are interme-
diate between our two strongly
marked varieties;—one, destitute of
any scape, the head sessile among
the leaves, which are just like
those of Meddell's figure, ~~except~~ but
rather more incised; the other, a
more evolute form, has less wovulate
leaves, from 3 to 5 inches long inclu-
ding the petiole, and only simply
repand-toothed. Scape one and a half
to three inches high, furnished with
many slender linear bracts. Head

Hemispherical, 7 or 8 lines high,
~~See~~ Scales of the involucre connate at the base.
Very many-flowered. Pappus
soft and white.

The allied S. rhizocephalus,
described by Weddell, was discov-
ered by Matthews (no. 624, in
herb. Hook.) at Casa Bancho.

Plate

Senecio werneri-

oides. A. Var. escapus, Fig. 1. Ray-
flower. 2. Disk-colla, ~~and~~ stamens, and
style displayed. 3. Summit of the style.
B. Var. scapus, Fig. 4. Ray-flower.
5. Disk-flower. 6. Summit of the
style. The details variously magnified.

**** Novo-Zealandici, et Aus-
traliarum

37. Senecio glastifolius, Hook. f.

Senecio glastifolius, Hook. f.

Fld. N. Zeal. 1, p. 147, t. 39.

Solidago arborescens, A. Brum.

Prodr., non Banks & Soland., nec
Forst.

Hab. Bay of Islands, New
Zealand.

A good Senecio, although
the bristles of the pappus are some-
what more rigid than is usual, and
the branches of the style are compressed
and obtuse, instead of truncate or
capitulate, both characters occur-
ring in other species of the genus.
As to the achenia, they are linear,

and with no more dilatation
at the top than is very common
in Senecio.

38. Senecio (Brachyglottis) ^{Hook. f.} Forsteri.

Senecio (Brachyglottis) Forsteri. Hook. f.

^{Schlecht.} Fl. N. Zee. 1, p. 148, t. 40, non

Brachyglottis repanda, Forst. Char.
Gen. p. 91, t. 46; DC. Prodr. 5,
p. 210.

Hab. Bay of Islands, New Zealand;
without flowers.

***** Australiani, etc.

33. Senecio tripartitus, A. Rich., ^{DC.}

Hab. Hunter's River, New South
Wales.

~~The lobes divisions~~

Many of the cauline leaves
are simply pinnate; the divisions
filiform or nearly so; and the
species perhaps passes into Dr.
Hooker's S. capillifolius.

34. Senecio pauciligulatus. ^{DB} A. Rich.

Tab. New South Wales, with the
preceding species.

35. Senecio lividus, Linna. was
picked up at St. Helena and Madeira.

36. Senecio rosmarinifolius, Linna. var.
Bergianus, DB.,

37. Senecio pubigerus, DB.,

38. Senecio pinnulatus, Thunb.,
from the Cape of Good Hope; along
with Euryops abrotunifolius, DB. ~~and~~
~~fragments of some other common Cape Compositae.~~

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Athousa hypleuroides, D.C.

The Cynarea of the collection are so unimportant that they need only be enumerated:—

Calendula Madeirensis, D.C. was picked up at Madeira.

Osteospermum moniliferum, Linn. at St Helena, introduced from the Cape of Good Hope.

Osteospermum laxum, D.C., Cape of Good Hope.

Cymbonotus Lawsonianus, Gandich. at New South Wales.

Gallunmia setosa, R. Br., Cape of Good Hope.

Carlina sulcifolia, Less., Madeira.

Gentanea Melitensis, Linn., Rio Negro, Patagonia, and Hunter's River, New South Wales.

Cynara cardunculus, Linn., Rio
Aguero, North Patagonia.

Leuzea australis, Gandich.,
Queenstown, New South Wales.

Subord. II. Bilabiati florae.

Chuquiraga, Juss.

1. Chuquiraga oppositifolia, Willd.
+ Don.

Chuquiraga oppositifolia, Willd. & Don in
Edinb. Phil. Mag. ann. 1832, p. 392;
Hook. & Arn. Comp. Bot. Mag. 1, p.
109; DC. Prodr. 7, p. 10; Kunze in
Gay, Fl. Chil. 3, p. 277; Wedd. Chlov.
And. 1, p. 3.

C. alpina, Poepp. ex Nic.; Less. Syn. p. 46.

C. chrysantha, Gardn. Sert.
Pl. A. 42.

Stat. Andes of Chili above
Santiago. — Throat and tube
of the corolla not bearded inside,
as in the succeeding, but gla-
brous.

2. Chuquiraga spinosa, Don.

Chuquiraga spinosa, Don in
Linn. Trans. 16, p. 285, Lb. l.c.;
Remy, l.c.; Wedd. l.c.

Baccharis spinosa, Ruiz & Pav. Syst. 1,
p. 188.

Stat. ^{Chili} Andes of ~~Peru~~ above Santi-
ago, and of Peru between Casa
Baranca and Belluay; — the Chilean
specimens exactly like the Peruvian.

3. Churquiraga acicularis, Don, ^{l.c.}

Hab. Andes of Chili above Santiago; an imperfect specimen.

4. Churquiraga erinacea, Gill & Don, l.c.

Hab. Rio Negro, North Patagonia; plentiful.

Flotowia, Spreng.

1. Flotowia ferox, Wedd. l.c.

Hab. Peru, in the vicinity of Obajillo.

From the description our plant

must be Weddell's F. ferrug.,
of the Bolivian Andes, although
the divisions of the corolla are
glabrous except the outer face
at the summit, which is bearded,
and the flowers seem to be her-
maphrodite. The slender spines
are an inch or an inch and
a half in length; the spinesse-
cently tipped leaves about the
same length, or the uppermost
shorter. Heads corymbose-fasci-
cled, 6 or 7 lines long, about 12-flaw-
ered. Anthers linear, equalling
the lobes of the corolla, ecaudate,
as in Dasyphyllum, which is
rightly reduced to this genus by
Weddell. Style exserted, glabrous.
Achenea villous.

2. Flotovia excelsa, Db. l.c.

Piptocarpha excelsa, Hook. &
Arn. in Comp. Bot. Mag. 1, p. 110.

Stat. Chili, in the vicinity
of Valparaiso, where alone the
species is known to occur. But the
Flora Chilena excludes the plant
from the Chilian flora.

Omoseris, Db.

1. Omoseris integrifolia, Less.

Stat. Obrajillo, Peru, collected
in Peru by Nie, Dombey, McLean,
Matthews, and, according to the latter
in Peru, Hook. by Ruiz and Paron.
But the peduncle is usually bracte-
ate, the bracts small and setaceous.

2. Groseria odorata, Hook. & Arn.

Leysera odorata, Ruiz & Pav.

Herb. ex Don

Chatachlena odorata, Don in ~~Re~~

Linna. Trans. 10, p. 256.

Groseria odorata Cumingi, ~~Don~~

~~(Leysera formica squamis exaristatis)~~

Hook. & Arn. in Comp. Bot. Mag.

1, p. 103, adn.; DC. Prodr. 7, p. 34.

Cursonia Peruviana, Nutt. in

Trans. Amer. Phil. Soc. n. ser.

7, p. 422.

Hab. Obrajillo, Peru.

An annual herb, a span or less in height; the primary stem erect, the lateral, radical branches often decumbent. Scales of the involucre very variable as to the setaceous tips.

Receptacle fimbriate. Bristles
of the pappus, said by De Can-
dolle to be biserial, are better des-
cribed by Don as in a triple order,
the interior (five or six) larger
and much stouter, the outermost
very short. ~~The receptacle is fimbriate.~~

Trichocline, Cass.

1. Trichocline incana, Cass.

Hub. Rio Negro, North Patagonia;
deflorate.

Barnadesia, Linn. f.

1. Barnadesia Dombeyana, Less.

Barnadesia Dombeyana, Less.

in Linnaea, 5, p. 246; Ob. Prodr.
7, p. 2.

B. lanceolata spinosa, Lam.

M. t. 660, f. 1, non Linn. f.

B. lanceolata, Don in Linn. Trans.

16, p. 277; Ob. l. c. p. 3.

Hab. Obrajillo, Peru, where
it is said to be common, and "an
ornamental shrub, four to eight feet
high, with large purple flowers."

Writing the two nominal species
the slightly posterior name of Lessing is
preferred to that of Don's, since the leaves
are ~~not~~ hardly lanceolate.

2. Barnadesia reticulata, Don^{l.c.}

Hab. Obrajillo, Peru, at the cascade.

Said in Dr. Pickering's notes to resemble the foregoing, but have compound heads. There is a mere fragment in the collection, destitute of flowers; the leaves glabrous or glabrate, veiny, ~~do~~ not ribbed.

Mutisia, Linn. f.

1. Mutisia speciosa, Hook.

Hab. Brazil, in the vicinity of Rio Janeiro. (Involucre an inch and a half long.)

2. Mutisia viciaefolia, bar.

Mutisia viciaefolia, bar. Le. 5, p.
62, t. 490; Don, l. c.; Hook. Bot.
Misc. 2, p. 222; DC. Prodr. 7, p.
5; Wedd. Chlon. And. 1, p. 15.
M. Candolleana, Gardn. & Field.
Sert. Pl. t. 45, 46.

M. hirsuta, Meyen; Malp. Rel.
Meyen. p. 284.

Hab. Near Obrajillo, Peru,
where, according to Dr. Pickering's
notes, an ornamental pinnate-
leaved species abounds, but no
specimen is preserved. Mr. Conck-
shanks gathered M. viciaefolia at
Obrajillo.

3. Mutisia latifolia, Don, l. c.

Hab. Chili, in the vicinity of Valparaiso,
leafy branches only,

4. Mutisia Matthewsii, ^{St. Arn.} Hook.

Mutisia Matthewsii, Hook. & Arn.
in Comp. Bot. Mag. 1, p. 107,
adn.; Wedd., Chlov. And. 1, p. 19.

Hab. Andes of Peru at Baños.

The specimens have a more persistent floccose wool, ~~than~~ especially on the lower surface of the leaves, — than the form characterized by Hooker and Knott. Weddell has completed the character of the species, which was overlooked by Sebaudolle, Walpers, &c. The minute appendage which abruptly tips the upper is usually enveloped in the small tuft of wool which adheres to the apex, and often falls away with it, so that these scales appear to be very obtuse and wholly inappendiculate. Ligules 10 or 12.

5. Mutisia Mastata, Cav.

Var. Peruviana: foliis angustioribus;
alis ramulorum in dentes acu-
tissimos ~~alte~~ ~~partitis~~ fere
divisis; involucri squamis
superioribus vix appendiculatis.

Hab. Andes of Peru, between
Culluac and Obrajillo.

Although the M. Mastata
described and figured by Caran-
illes came from the Chilean
Andes, yet he adds (what sub-
sequent authors have overlooked)
that he had it also from Peru,
gathered by Née. This is confir-
med by our specimen, which well
accords with the figure and ~~descrip-~~
Description of this species, except

That the leaves are smaller ($2\frac{1}{2}$
~~or 3~~ inches long, and 4 or 5 lines
broad at the sagittate-hastate
base) and the upper scales of
the involucre are inappendic-
ulate, or bear a very small and
deciduous appendage. The ligules
are 10 or 12.

6. Mutisia subulata, Ruiz & Pav.

Stub. Chili, in the vicinity of
Valparaiso, and to the Cordilleras.

7. Mutisia linariaefolia, Remy

Mutisia linariaefolia, Remy in
Gay Fl. Chil. 3, p. 271; Wedd.
Chlor. And. 1, p. 19.

M. linariaefolia, Hook. Bot. Misc.
1, p. 12, t. 8.

Stat. In the Andes of Chile
above Santiago.

Stiftia, Mikam.

1. Stiftia chrysantha, Mikam.

Stat. Rio Janeiro, Brazil,
collected in the Botanic Garden.

Moquinia, Db.

1. Moquinia polymorpha, Db. var.
elaagnifolia, Less.

Stat. Brazil, in the Organ
Mountains near Rio Janeiro.

Gochmatia, H.B.K.

1. Gochmatia (Pentapthorus) foliolosa.

Pentapthorus foliolosus, Don in
Linn. Trans. 16, p. 297.

Pentapthorus pyrifolius? & P. glutin-
osus, Gill.; Don in Edinb.
Phil. Mag. ^{ann.} 1832, p. 392.

Gochmatia pyrifolia, rigida, & glu-
tinosa ^(Don); Hook. & Arn. in Comp.
Bot. Mag. 1, p. 108.

G. fascicularis, pyrifolia, rigida,
& glutinosa, Lb. Prodr. 7, p. 25;
Kerney in Gay Fl. Chil. 3, p.
290.

Hab. Chili; near Valparaiso,
and on the Andes above Santiago.

The specimens ^{are all referable to the var. rigida; those} from near the
coast, with broader leaves, although
sparingly denticulate, approach Ber-

Herzog no. 989, which I take to
answer well to Don's original Pent-
apnomus foliolosus. Those from the
Andes above Santiago, with lanceolate
leaves, some of them strongly dentic-
ulate, others quite entire, accord with
Don's G. rigida^{vs.}, and with the
G. fascicularis of De Baudolle and
of Kemy. But Don's G. fascicu-
laris, I believe is different, and
it is said to have "numerous
florets in the capitulum". In
any case the specific name foli-
olosa takes precedence for our ^(polymorphous) plant.

Cyclolepis, Don.

1. Cyclolepis genistoides, Don.

(On the plains at the mouth of the
Hab.) Rio Negro, North Patagonia;
nearly deflorate.

The materials are insufficient for any investigation of this genus. The tails of the anthers, in some flowers from a specimen out of Gillies' collection, are not lacerate, but sparingly beset with villose hairs.

Ityalis, Don.

1. Ityalis argentea, Don, (Tab.)

Ityalis argentea, Don; Hook. & Arn.
in Comp. Bot. Mag. 1, p. 108;
Sc. Prodr. 7, p. 28.

Hab. Salt plains and marshes
of the Rio Negro, North Patagonia;
the var. β . Hook. & Arn., with the ovate,
obtuse, and nerveless involucral scales.

Besides the recorded collections, this plant ~~was~~ occurs in those of Bacle from Buenos Ayres and of D'Orbigny from Patagonia. It is hardly worth while here to draw up a revised character of the genus; but our figures and a few notes will furnish some emendations. As to the receptacle, I cannot verify the "fimbriis callosis singulis sub achenio singulis" of Hooker and Arnott. The receptacle is naked, with broad areolæ for the insertion of the five or six flowers, between which one or two minute setulæ are often, but not constantly found; I have not observed one for each achenium. The achenia are silky-pubescent, but somewhat

glabrate

^ at maturity, especially near the narrowed base, when the ribs become conspicuous. The bristles of the pappus, which are copious and pluriserial, are no more comate at the base than in all the allied genera, they are nearly equably barbellulate or denticulate. The tails of the anthers are long and stout, and not lacerate, but rather plumose with long, cobwebby hairs. Style not bulbous at the base, gradually thickened towards the summit; the branches very short, thick, and obtuse, naked. A more remarkable peculiarity, ~~is found~~ ^{and} which rather militates against Middell's group of Plaricea, — is found in the corollas: these ^{are more} ~~although~~ commonly.

uniform and bilabiate, as described, but not rarely in our specimens with the limb equally five-parted in one or more of the flowers, perhaps ⁱⁿ the central one, the lobes revolute, in this as in some other respects ~~showing~~ indicating an affinity with Weddell's Aphyllocladers.

Plate Styalis argentea; branch of the natural size. Fig. 1. Receptacle. 2. A flower. 3. ~~Corolla~~ A corolla regularly cleft. 4. Anther. 5. Summit of style. 6. Achenium and pappus. 7. Portion of a bristle of the pappus more magnified.

Proustia, Lag.

1. Proustia pyrifolia, Lag.

2. Proustia baccharoides, Don.

Stat. Chili, the former in the vicinity of Valparaiso; the latter near Santiago.

Brachyclados. Don

1. Brachyclados lycioides, Don.

Stat. Rio Negro, North Patagonia; the ordinary form, and one with stouter branches and larger heads.

The sterility of the ^{stamens in the} ray flowers is hardly constant or complete; the ^{proper} scales of the involucre vary from five to nine, and the bristles of the pappus are perhaps barbellate, but not properly plumose.

(Par.)

Chaetanthera, Ruiz &

1. Chaetanthera linearis, Less.

Chaetanthera linearis, Less. Syn. p.
112; Hook. & Arn. in Comp. Bot.
Mag. p. 104; Dc. Prodr. 7, p. 30;
Less. Ic. Sel. 4, p. 80.

Hab. Chili, in the vicinity of
Valparaiso; a single specimen.

(L.C.)

2. Chaetanthera moenchiioides, Less.

Hab. Andes of Chili; ~~above de~~
~~Santiago~~ florata.

3. ~~Chaetanthera serrata, Ru~~

tennifolia.

3. Chatanthera serrata, Ruiz Pav. var.

Chatanthera tennifolia, Gill.; Don
in Edinb. Phil. Mag. ann. 1832,
p. 391, non DC. in Deless. Ic.
Del. 4, t. 81.

C. eryngioides, Gill.; Don, l.c.
C. spinulosa, Cass. Opusc. 2,
p. 103?

Stat. Chili, in the vicinity of
Valparaiso.

The Chatanthera serrata of
Ruiz and Pavon, being earlier than
Willdenow's Perdicium chilense,
has to be adopted. Remy has
rightly referred to this species
Don's C. argentea, and the C. tennifolia
may be added. The plant
figured under the latter name in
Delessert's Icones, however, is C. monch-

ioides, Less.

The Chaetanthera villosa of
Gillies and Don! is the Carme-
lita formosa of C. Gay, well fig-
ured both in the Flora Chilena
and the Chloris Andina.

4. Chaetanthera Peruviana, Sp. nov.

C. annua, ^{tenella,} diffuse ramosa;
foliis lineari-cuneatis vel spa-
thulatis versus apicem spin-
uloso-dentatis ^{laxe} ~~sub~~ villosis max
glabratiss, summis ~~paucis~~ circa capi-
tulum confertis (angustioribus);
involucris squamis subscariosis
retusis, exterioribus ovalibus,
costa in appendicem ~~filiceam~~
~~apicem~~ nunc folioformem 1-3-
dentatam nunc filiformem

producta, interioribus lineari-
oblongis saepe mucronulatis;
ligulis linearibus ^{per} glabris in-
volucrum vix superantibus,
labio interiori parvo brevi
apice bidentato.

Hab. Andes of Peru, between
Baños and Basa Bancha.

The genus Chatanthera, as
now limited, is said by Meddell
to ~~be~~ ^{geographically} ~~occur~~ be restricted to Chile,
and not to ascend the Andes to
the alpine region. Here, however,
we have a species from the Andes
of Peru, ^{inhabiting} the alpestrine if not
~~in~~ the alpine region, probably only
in the former. There is in the
Hookerian Herbarium a depauper-
ate specimen, I believe of this ~~sp.~~

species, ticketed "Canta. Peru",
then ~~from~~ from the same District.
This species much resembles C.
tenella, and has similar folia-
ge, pubescence, &c. Apparently
it is more branched from the
base and diffuse; the involucre
is decidedly different; the scales
being all very obtuse and mostly
retuse or emarginate, the in-
nermost with a delicate, some-
times obsolete, nureo in the
shallow notch, some of the
middle ones with a filiform or
narrowly linear, more or less
foliaceous appendage, the outer-
most bearing a broader, often
toothed foliaceous appendage, so
passing into the leaves which sub-
tend the head. The ligules resemble
those of C. tenella, but are ^{not so} less
hairy on the back ~~and~~ nor so much

toothed at the apex, while the
inner lip is minute and barely
^{so sterile stamens in the ray-flowers; their styles}
notched at its apex. ~~Style~~ bifid.
All the flowers fertile. Achenia
papillose. Bristles of the pappus
not coalescent at their base.

Fig. 2.

Oriastrum, Poepp. & Endl.

(Tab.)

1. Oriastrum pusillum, Poepp. & Endl.

Oriastrum pusillum, Poepp. &
Endl. Nov. Gen. & Sp. 3, p. 50,
t. 257; Wedd. Chlor. And. 1,
p. 29, t. 9.

Hab. Andes of Chili above San-
tiago: a single specimen, detected
among specimens of the following
species.

The good figures given by Weddell
since our illustrations were prepared
show the identity of our plant
with Oriastrum pusillum of ~~Poepp.~~
Poeppig. The details of our illus-
~~tration~~ = tration are not wholly su-
perfluous, since they represent
abortive stamens in the rays, not
before noticed, - still more appropi-

creating the genus to Tyllonia
and Egania. The latter genus might well enough be referred
to Oriastrum, and both perhaps to Tyllonia,
~~serious error~~ ~~occurs~~ in

transcription has vitiated Med-
dell's amended character of
Oriastrum, viz. the achenia
of the disc, instead of those of the
ray are said to be glabrous,
^{those of the ray, instead of the disk,} papillose and fertile
and effete.

The pappus of
the fertile flowers ^{in O. pusillum} compose more
than one series of bristles, which,
being united at the very base, fall
off in a ring, but ~~soon~~ easily
separate.

Plate A. Oriastrum pusillum:
single plant, natural size. Fig. 1. A leaf.
2. A scale of the involucre. 3. A ray-
flower. 4. A disk-flower. 5. Its corolla. 6.
displayed. 6. Summit of fertile style. 7.
Summit of style of a ray-flower. - The
details variously magnified.

~~renating the genus to Tylloma~~

Plate

(~~Aldunatea~~) Tab.)
2. Oriastrum chilense, Wedd. (K

Tylloma pusillum, Don in
Edinb. Phil. Mag. l.c. p. 391;
Sc. Prodr. 7, p. 32.

Chaetanthera (Tylloma) pusilla,
Hook. & Arn. in Comp. to Bot.
Mag. 1, p. 106.

Aldunatea chilensis, Kunze in
Gay, Fl. Chil. 3, p. 322, t. 38.
Oriastrum chilense, ~~Kunze~~ Wedd.,
Chlor. And. 1, p. 30.

Hab. Andes of Chili above
Santiago.

(also) This interesting little plant
is now well illustrated in the
Flora Chilena. I have only
to add that the pappus of the
^{generally of two or three caducous bristles,}
ray ~~is~~ sometimes wholly wanting;
~~The fertile achenia are pyriform~~
~~that of the fertile or disk-flower is nearly unispinal, the bristles~~
~~united into a ring.~~
The pappus is finer and softer
than that of the original spe-
cies of Oriastrum, but it is not at
all worth while on this account to
keep up Adumata as a section.
The fertile achenia are pyriform: the pap-
ille of their surface, when soaked, swell
into a jelly, and then the achenia appear
to be glabrous.

Plate B. Oriastrum Chilense;
natural size. Fig. 1. A leaf. 2. Head detached.
3. Ray-flower, without pappus. 4. ~~5. 4.~~ A disk-
flower. 5. Embryo. — The details magnified.

NW. (Tab.)

3. Oreastrum cochlearifolium, Sp. L

O. pulvinatum, laxa ^{arachnoideo-}~~arenosa~~ la-
natum; foliis in caulis brevibus
~~laxis~~ confertim imbricatis sessil-
ibus ^{crassis} obtusissimis muticis dor-
so mox glabratis, intus sub-
marginibus incurvis concavis lanu-
ginosis, inferioribus oblongis, su-
perioribus spatulatis capitulum
sessile arcte rosulato-
cingentibus; involucri squamis
omnibus scariosis, apice radi-
ante colorato ovato-lanceola-
to acuto rigidiori; pappi
setis capillaribus rigidis basin
versus parce barbellatis su-
perne ^{tere} laevibus.

Hab. Alparmarca in the
high Andes of Peru.

A remarkable and very distinct species, ^{of *Oriastrum*} ~~of this genus~~, stems and interesting from its extending the range of the genus further north. Stems ^{or radical branches,} as in its congeners, usually several in a cluster from a slender annual root, barely an inch long, densely clothed with appressed leaves, especially towards the nearly included head, around which they are closely imbricate-clustered. The leaves ^{of a} are thick and probably coriaceous-fleshy consistence, nerveless and veinless, blunt and muticous, and with a somewhat incurved callous margin, soon glabrate on the back, but the inner face lanuginous with implexed cobwebby wool, those toward the base of the stems are only 2 or 3 lines long,

and oblong in shape, and strictly sessile; the upper ones gradually become ~~3~~ 3 to 5 lines long, and spatulate ^{or spoon-shaped}, but the more or less narrowed lower portion cannot be termed a petiole. The head resembles that of *O. Chilense*; the brownish radiant tips of the scales of the involucre considerably exceeding the flowers. The flowers being young it is uncertain whether the female ligulate flowers are sterile; ^{perhaps} they ~~probably~~ are, although their style appears ~~rather~~ more normal, and is manifestly bidentate at ^{and the ~~the~~ waxy bears a good orifice} the apex. Their corolla has a linear ligule, which is absolutely tridenticulate at the apex, and at its base on the inner side two minute teeth represent the other

lip. Disk-flowers as of the genus, but the ovaries apparently glabrous. Pappus nearly the same in ray and disk, of about two series of slender, capillary, but rigid bristles, which slightly cohere with each other at the base, the lower part dilated a little thicker and delicately and sparsely barbellulate, the upper not at all dilated, smooth or obsoletely denticulate under a good lens. Receptacle plane. Mature achenia unknown.

Plate C. Griastrum cochleari-
folium: a plant of the natural size, Fig. 1. A leaf, inside view. 2. A scale of the involucre. 3. A ray-flower. 4. A disk-flower. 5. The same displayed. 6. A stamen. 7. A bristle of the pappus. The details variously magnified.

Leria, Seb.

1. Leria nutans, Seb.

2. Leria integrifolia, Cass.

Stat. Brazil, in marshes at the base of the Organ Mountains, near Rio Janeiro.

Macrachenium, Stok.f.

1. Macrachenium gracile, Stok.f. (Seb.)

Macrachenium gracile, Stok.f.
Fl. Antarc. 2, p. 321.

Stat. Orange Harbour, Tuegia.

This rare plant, before known only from ^{the} ~~a~~ single

specimen, collected at Port Famine
by Capt. King, on which Dr.
Hooker founded the genus, was
gathered abundantly and in good
fruiting condition by our Natu-
ralists. There is little, however,
to be added to the account of
the genus. The flowering stem
and radical leaves rise from a
rather slender, scaly, and perhaps
creeping rhizoma, and is slender
and scapiform, ^{from nine to twenty inches high,} simple or sparing-
ly branched ~~towards~~ ~~at~~ the base, ~~where~~
above which it commonly bears
one or two alternate leaves, the
long upper portion naked, mono-
cephalous. Whole surface of the
plant floccose-lanate, but the
upper surface of the leaves gla-
brate, the lower fulvous-canes-
cent with the woolly coat.
Petioles of the radical leaves slender,

3 to 6 inches long; those of the
Carline leaves usually margined
or winged, often dilated and
clasping at the insertion; the
blade oblong or ovate-oblong in
outline, deeply pinnatifid into
from 5 to 13 lobes, which are
oblong or oval, obtuse, entire
or nearly so, or the lowest
bearing one or two lobes or
coarse teeth. Scales of the
simple involucre 12 to 14, linear,
gradually acute or acuminate, ^{a few of} the
exterior shorter. Flowers numer-
ous, all perfect and alike. Re-
ceptacle strongly convex, naked.
Corolla ~~4 to 5~~ lines long; the tube
nearly filiform; the lips short,
a little more than ^{long, and of equal} a line ⁱⁿ length;
the outer lip oval, ^{more or less} ~~obtusely~~ three-
lobed, the inner parted into two.

narrowly linear divisions. Stamens borne on the upper part of the tube: filaments short, slender, smooth: tails of the anthers rather short, ~~setose~~, nearly naked. Style filiform, the branches half a line long, oblong-linear, flat, obtuse, naked, the margins obscurely papillose, ~~the~~ ~~an~~ inappendiculate. Achenia slender, from $3\frac{1}{2}$ to 6 lines long, the central ones longest, terete, glabrous, many-ribbed, moderately tapering to the summit, but not truncate, the cell extending to the very apex. Pappus of about 35 slender plumose bristles, ~~in~~ somewhat in two series, rather longer than the achenia, fulvous.

As the style of this plant is rather that of the Mutisiaceae than of the Nassauviaceae, and the relationship to Chabrea is hardly manifest, I should refer the genus to the former group.

Plate Macracherium gracile 3 of the natural size. Fig. 1. Re-
ceptacle, ^{with a full-grown achenium,} 2. A flower, 3. Corolla and
stamens displayed. 4. A stamen. 5. Sum-
mit of the style. 6. A bristle of the pappus.
The details ^{variously} magnified.

Chabrea, Dc.

1. Chabrea dancifolia, Wedd.

Chabrea dancifolia, Wedd. Chel.
And. 1, p. 35, cum descr. Don
C. laciniata, Wedd. l. c. p. 34,
t. 10.

Ptilurus dancifolius, Don
in Lin. Trans. 16, p. 35.

Hab. High Andes of Peru,
between Basa Banha and. Bulhuay.

The specimens so completely
accord with Don's character of
Ptilurus dancifolius, except as to
the bristles of the pappus, which
are not imbricated (but connate)
at the base, that I do not have
little hesitation in referring the

Discrepancy to an error of observation, and in preserving the original specific name.

Jungia, Linn. f.

1. Jungia ferruginea, Linn. f.

Lab. Obajillo, Peru.

Jungia, Linn. f., Less.

1. Jungia paniculata.

fruticosa;
J. foliis subtus tomentosis, to-
mento albido implexo; capit-
ulis ^{conferte} cymosis plerisque pediculatis
multifloris; involucri
squamis ~~involucri~~ interioribus
paleisque floribus ^{"luteis"} pappoque
subdimidio brevioribus; acheniis
pilosisculis. - Variat peti-
olis ^{basibus} quasi stipulatis vel nudis.

Dumerilia paniculata, DC.

Mem. Lab. p. 14, t. 16; bass.
Opusc. 1, t. 12.

Jungia ferruginea, Don in Linn.

Trans. 16, p. 225; Less. in Lin-
naea, 5, p. 37; ^{Syn. p. 415} DC. Prodr. 7, p.
54, non Linn. f.

J. spectabilis, Less. Syn. p. 415;
DC. Prodr. l.c. ^{non} Don.

Itab. Obrajillo, Peru; in
vicinity of which it was collected
by ^{Peniz and Paron,} ~~Cruckshanks~~, and ~~by~~ Matthews.
Gathered also in Peru ~~probably~~ ^{doubtless} by
Joseph Jussieu, and by Donbey,
whose specimens in the Paris Mu-
seum are, however, marked "Chili".

"A shrub, from three to five
feet high", according to a memo-
randum of Dr. Pickering; the
petioles not stipulate or appen-
daged, in which respect they
accord with Don's description
and with Cassini's figure. But
such appendages are inconstant.
— Although nearly related to
Jungia ferruginea, yet I suppose
that Don was wrong in referring
the plant he has well described
to that of the younger Linnaeus.
Also, that the original character

of Jungia is not so incorrect
as has been thought. I pre-
sume (although I cannot now ~~ver-~~
verify the supposition) that Lin-
naeus received ~~the plant~~ his Jungia
feruginea, along with most of the
~~new~~ ^{described} plants from "America Men-
dionali" in the Supplement, from
Mutis, — therefore probably from
~~Santa Fe de Bogota~~, whence ~~of~~
I have from Mr. Solton what is
manifestly the Linnaean species.
I have the same species from
the base of Pichincha, gathered
by Mr. Conthory, and I think
that Prof. Jameson has also sent
it to Sir Wm Hooker. In this
species the individual heads con-
tain from five to ten flowers only,
and ~~these~~ are commonly so closely
clustered in fascicles as to explain,
if not to excuse, the view taken by the

junger Linnaeus of a compound
capitulum. The fructiferous scales
and paleae ^{and erect} are more strictly involute than
in the Peruvian *J. paniculata*,
and longer, so that the pappus
barely exceeds their summits.*
~~Debandollis~~ Lessing and
Debandollis (but not Doris) *J.*
spectabilis is the same as ~~De~~

* *Jungeria ferruginea* (Linn. f.
suppl. p. 58, 390): scandens vel sar-
mentosa; foliis 5-9-lobatis subtus
pennoso-villosis; capitulis 5-10-
floris glomeratis, glomerulis in
corymbis paniculatos thyrsosve
congestis; squamis involucri inter-
ioribus paleisque arcte involutis
flores ~~pappumque~~ et pappum
subaequantibus; acheniis glabris.

Candolle's Dumerilia (our Jungia)
paniculata without stipular
appendages.

2. Jungia axillaris, Spreng.

Dumerilia axillaris, Lag. ex

Ob. Mem. Lab. p. 72, t. 15.

Jungia axillaris, Spreng. Syst.
Veg.⁵, (Ber. Post.) p. 301; Ob.
Prodr. 7, p. 55.

Ital. Peru ^{below} ~~between~~ Obrajillo
where it was also collected by Matthews,
~~and Lima~~. Heads often solitary
~~at the end of the~~ peduncle termi-
nating the branchlets. Corollas
"purple" or rose-color, as they evi-
dently were in a glabrate form of
this species collected by Gay in the
department of Cuzco.

Perezia, Lag., Less., Wedd.

Clarionea & Stomioanthus, DC.
Mem. Lab.

Perezia, Drozia & Platycheilus
Acontia ^{Cass.} ~~Clarionea~~ & Stomioanthus, Don.
Perezia & Dumerilia, Less.

Perezia, Clarionea, Stomioanthus,
Acontia, ~~Don~~ Dumerilia, &
Prunostia sect. Thelacarpaea, DC.
Prodr.

Perezia, Gray in Pl. Fendl. p. 111,
& Pl. Wright. 1, p. 126.

Trixis spec. Schult. & Bip.
in Sem. Bot. Sterald, p. 314.

I cannot at all agree with
Dr. Schult. who refers the Mexican
and North American species of
this extended genus to Trixis. The
involucre, habit, &c. will distinguish

The latter, Trixis has a uniseriate involucre, the scales all of the same length, with or without a circle of spreading, mostly foliaceous bracts at the base of the head. In Pereria even the fewest-flowered species have a gradately imbricated involucre; ~~the exterior scales~~ and the achenia are not rostrate.

1. Pereria Magellanica, Lag.

Pereria Magellanica, Lag. Annon.
1, p. 31; Cass.; Less. in Linnaea,
5, p. 23; Hook. & Arn. in Comp.
Bot. Mag. 1, p. 34.

Perdicium Magellanicum, Linn.
Suppl. 1, p. 376; Vahl. in Act.
Hafn. 1, p. 10, t. 4.

Clavionea Magellanica, Stb.
Mem. Lat. p. 65, t. 3, &
Prodr. 7, p. 61; Hook. f. Fl.
Antarc. 2, p. 321, t. 111; Kunze
in Gay, Fl. Chil. 3, p. 406.
Clavionella Magellanica, Houtt.
& Jacq. Voy Pol. Sud, t. 10,
fide Hook. f.

Stab. Orange Harbour, Zuegia.

2. Pereria lactucoides, Less.

Pereria lactucoides, Less. in
Linnaea, 5, p. 22, & Syn. p. 413.
Perdicium lactucoides, Vahl, l. c.
p. 10, t. 5.

Aster Magellanicus, Lam. Ill. t. 681,
f. 3.

Clavionea glaberrima, Bass. Opusc.
2, p. 165.

Clammia lactucoides, Don in Linn.
Trans. 16, p. 206.

Chetanthera Magellanica, Spreng,
Syst. 3, p. 503.

Stomvianthus Magellanicus,
Dc. Prodr. 7, p. 15; Hook. f.
Fl. Martae. 2, p. 322.

Hab. Orange Harbour; both
the dwarf and the tall states,
and intermediate specimens.

3. Perezia Doniana, Less.

Perezia Doniana, Less. l.c.;

Nodd, Chlor. And. 1, p. 38.

P. Beckii, Hook. & Arn. in Comp.

~~the~~ Bot. Mag. 1, p. 34.

Claronia recurvata, Don in ~~Linn.~~

Linn. Trans. 16, p. 206, excl. syn.

Stomvianthus Beckii, Hook. f. l.c.

H. Donianus, Kemy, in Gay Fl. Chil. 3, p. 422.

Hab. Sand-hills at the
mouth of the Rio Negro, North
Patagonia. Sterile shoots only
collected with a single deflorate
head.

4. Perezia carthamoides, Hook. & Arn. ^{l.c.}

Clarionea carthamoides, Gill.;
Don.; Ob. Prodr. 7, p. 11; Desess.
Zc. Sel. 4, t. 93.

Hab. Andes of Chili above
Santiago.

5. Perezia virens, Hook. & Arn. ^{l.c.}

Hab. Andes of Chili above San-
tiago, with the preceding.

6. Perezia caulescens Wedd.

Perezia caulescens, Wedd. Cher.
Ind. 1, p. 39; t. 10.

Stat. High Andes of Peru
at Casa Barcha.

Heads sessile in the crown
of leaves, about the size of those
of P. pinnatifida, of which it
is probably a more condensed and
glabrous
variety. The state of the speci-
mens does not permit an exam-
ination of the receptacle.

7. Perezia nivalis, Wedd. l.c.

Var. β . foliis pinnatilobatis vel
sinnato-dentatis sublyratis.

Itab. High Andes of Peru
at Alpanmarca. Leaves ~~much~~
~~less deeply lobed than~~ not pin-
natisect, nor even deeply pin-
natisect in the scanty specimens;
but otherwise the plant accords with
the characters of P. nivalis.

8. Perezia pungens. Less. l.c.

Itab. Andes of Peru near
Baños: dwarf or depauperate
specimens.

9. Perezia multiflora. Less. l.c.

Itab. Andes of Peru near
Abrajillo.

Irixis, P. Browne.

1. Irixis frutescens, P. Browne, var. pubens.

Irixis frutescens, var. latifolia &
var. denticulata, Less. Syn. p. 414.

Pendicium cacalioides, H. B. K. M.
Gen. & Sp. 4, p. 154.

Irixis paradoxa, Cass. Opusc.

2. p. 110 (fide spec. Dombey, in
Herb. Mus. Par.); Ob. Prodr. 7,
p. 67.

I. cacalioides, Don in Linn. Trans.
16, p. 187; Ob. l.c.

I. Neesana, Ob. Prodr. 7, p. 67.

Hab. Peru, in the vicinity of
Lima, Yanga, and Obajillo.

Lessing has, I doubt not, taken
a correct view of the extent of Irixis
frutescens; but his distribution
of the forms is not so good. The

typical or original form, common
in the West Indies, is glabrous or
nearly so throughout. It varies,
^{does} as the pubescent form (of which
the principal synonyms are given
above) with entire or serrulate,
acute or obtuse leaves. The two
run together, and both into ~~narrow~~
~~row~~ lanceolate-leaved forms; the
smooth one into the var. angustifolia,
Dc., the silky-pubescent or
pubescent one, ~~into~~ towards the
northern geographical limits of the
species, into ~~the~~ forms which, in
the second part of Planta Wrightiana,
(no. 1249, coll. Wright.)
I had confounded with T. angustifolia,
Dc.

This Trixis angustifolia, Dc.,
which is probably a narrow-leaved form
of the older T. corymbosa, Don, is known
by its linear-lanceolate scales of the
involucre gradually tapering to a point.

The margins of the leaves are commonly entire and revolute (as in Berlandier's no. 1284 and 1353, Guss's no 566 (while his no. 840 is *T. pubescens* var. *pubens*, with obtuse scales), and Wright's no. 413); but they are plane and sharply denticulate or repand-toothed, ~~in spec~~ as well as broader, in specimens of Thunberg and Schott, which were referred to *T. pubescens* in the Botany of the Mexican Boundary Survey, p. 103.

Trixis bracteata, Hook. & Arn. is probably not different from *T. longifolia*, Don.

Nassauria, Commas, Mod.

1. Nassauria marcolens, Willd.

Hab. Grange Harbour, Tuegia;
on the mountains,

2. Nassauria ramosissima, Db.

Hab. High Andes of Chili, above
Santiago. (This, rather than the next
should be Doris N. marcolens.)

3. Nassauria Bummingii, Stock. & Arn.

Nassauria Bummingii, Stock. & Arn. in
Comp. Bot. Mag. 1, p. 37.

N. pyramidalis, Meyen, Reise 1,
p. 356; Walp. in Rel. Meyen, p.
288; Mod. Chlor. And. 1, p. 54.

N. macracantha, Db. Prodr. 7, p. 49.

Kemig. in Gay, Fl. chil., 3, p. 342; - - -
Nedd. l. c.

N. spicata, Kemig. in Gay, Fl. chil.,
3, p. 343; Nedd. l. c. p. 54, t. 51.

Hab. Chili, in the Andes above
Santiago.

4. Nassauia (Mastigophorus) ^{Nedd.} Kemigana.

Nassauia (Mastigophorus) Kemigana,

Nedd. Chlor. And. 1, p. 51, t. 12,
Calopappus acanthifolius, Kemig. in Gay, Fl.
chil., 3, p. 297.

Hab. Andes above Santiago,
Chili; a single, imperfect specimen,
mingled with those of the preceding
species.

5. Nassauia (Mastigophorus) pygmaea, Hook.

Nassauia pygmaea, Hook. f. Fl.
Antarc. 2, p. 319.

Triachne pygmaea, Cass. Bull. Philom.
& Dict. Sci. Nat.; Sb. Prov. 7, p. 50.

Ital. Orange Harbour, Fregia,
Two forms; one with the leaves
slightly, the other strongly striate-
nerved.

b. Nassauia (Panargyrum) ~~acutata~~
oligocephala, Wedd.

Nassauia (Panargyrum) oligocephala,
Wedd. Chlov. And. 1, p. 53.

Panargyrum uniflorum Gill. & Don
in Edinb. Phil. Mag.; Hook. &
Arn. in Comp. Bot. Mag. 1, p. 37.

P. oligocephalum, Dc. Prodr. 7, p.
54; Kuny in Gay, Fl. Chil. 3,
p. 367.

Ital. Andes of Chili, above San-
tiago.

Triptilium

Triptilion, Ruiz & Pav.

1. Triptilion spinosum, Ruiz & ^{Pav.}

Hab. Chili, in the vicinity of
Valparaiso.

Strongyloma, Dc.

1. Strongyloma axillare, Dc.

Triptilium axillare, Lag. in Spreng, Syst. 3, p. 506.
Nassauia axillaris, Don in Edinb.

Phil. Mag. ann. 1832, p. 390.

Acanthophyllum axillare, Hook. &

Arn. in Comp. Bot. Mag. 1, p. 37.

Strongyloma axillare, Dc. Prodr. 7, p.

52; Kemy in Gay, Fl. Chil. 3,

p. 360, t. 40; Wedd. Chlor. And. 1,

p. 54, t. 13.

Hab. Andes of Chile above
Santiago.

Polyachyrus, Lagasca.

1. Polyachyrus sphaerocephalus, Don.

Polyachyrus sphaerocephalus, Don
in Linn. Trans. 16, p. 230.

P. echinopsoides, DC. Prodr. 7, p. 53.

Bridgesia echinopsoides, Hook. Bot.

Misc. 2, p. 222, t. 92.

Polyachyrus sphaerocephalus, Hook.

& Arn. adn. in Comp. Bot.
Mag. 1, p. 36.

Hab. Andes of Peru below Cul-
bray; in the same district where
it was collected by Buckshanks (from
whose specimens it was
illustrated by Sir Wm. Hooker).

and probably by Ruiz and Pavon, and by Donbey, although specimens of the latter's collecting in the Paris Herbarium are ticketed as from Chili, as is the case with many of Donbey's Peruvian plants.

Subord. III. Liguliflorae,

Tolpis, Adans., Db.

1. Tolpis (Schmidtia) filiformis, ^{Db. ex Schultze Bip.}
2. Tolpis (Schmidtia) fruticosa, Schrank.
3. Tolpis (Schmidtia) macrochira, Db.

Hab. Madeira; the latter on Pico Ruivo.

Hypochaeris, Vaill., Db.

1. Hypochaeris radicata, Linna.

Hab. St. Helena; doubtless introduced from Europe.

2. Hypochaeris glabra, Linn.

Stat. Bay of Islands, New Zealand; probably introduced from Europe and very local, as no other collectors in New Zealand have met with it. Also, which is equally remarkable, a single and depauperate specimen was picked up at ~~Hunter's River~~, New South Wales, upon the excursion from Sydney to Hunter's River. It can hardly be Endlicher's Cycnosensis australis, for the exterior achenia are beakless. The species seems to affect the Southern Hemisphere, having also established itself at the Cape of Good Hope.

Achyrophorus, Scop.

1. Achyrophorus arenarius, DC.

Hypochaeris arenaria, Gand.!
in Ann. Sci. Nat. 5, p. 103, &
Bot. Freyc. Voy. p. 134, 461.
H. minima, D'Urv. in Mem.
Ac. Linn. Par. 4, p. 609.

Achyrophorus arenarius, DC.
Prodr. 7, p. 95; Stork. f. Fl.
Antarc. 2, p. 323, t. 112, fruct.
A. Webbii & A. coronopifolius,
Schultz Bip. Hypochaer.?

A. microphyllus, Remy in
Gay, Fl. Chil. 3, p. 449,

Var. simplex, monocephalus,
involucro nigrescente apice =
que scapi pilis brunneis
nigrescentibus hispidis.

Itab, Orange Harbour and
Good Success Bay, Fuegia; the
variety with dark hairy involucre. High Andes of Chili
above Santiago, a dwarf state, with glabrate involucre, nearly
A. microphylla, but with deeply pinnatifid leaves.

The ^{Argentine} specimens certainly
belong to Gandichand's species,
who had himself noted that
specimens were often simple and
monocephalous, as is the case
with all of ours. To the syn-
onyms adduced *A. tenuifolia* ^{and some others}
may probably be added.

2. Achyrocephalus apargioides, DC. l.c.

A. apargioides & *Lessingii*, Schultze Bip. Hypo-
chier. & New. Achyroceph.

Porcellites apargioides, Less. in
Linnaea, b, p. 102.

Seriola apargioides, Less. Syn. p.
131; Hook. & Arn. in Comp. Bot.

Mag. 4, p. 31. ~~profructu~~ ^{p. 388}

Oreophila apargioides, Don in Edinb. Phil. Mag. ann. 1832, 1
(*& microides*) (Valparaiso)

Itab, Chile, in the vicinity of

Small reliance can be placed upon the beak of the achenia, especially of the marginal ones, and less upon the hairiness or smoothness of the foliage and involucre. In the specimen of the present collection the marginal achenia are smooth, pale, five-grooved, short and thick, the apex abruptly contracted into a very short beak; but all the inner ones, although pubescent, are long-beaked, like those of Lessing's and of Remy's A. asparagioides. Remy's A. tenerifolius may also be referred to this species.

Schultz Bip.

3. Achyrocephalus Chillensis, [✓]

Aspargia Chillensis, H.B.K.,
Nov. Gen. & Sp. 4, p. 3.

Hab. Andes of Peru, between
Culluay and Obrajillo.

4. Achyrophorus Gardneri, ^{Schultz Bip.}

Achyrophorus Gardneri, Schultz
Bip. Rev. Brit. Achyr. in
Jahresb. Pollich. 1859, no. 38.
~~Achyrophorus~~ Brasilensis, Gardn. in
Hort. Lond. Jour. Bot. 4, p. 128,
non Less.

Hab. Brazil, in the Organ
Mountains near Rio Janeiro;
in marshes.

Probably distinct from any of the ^(various)
forms comprehended by Lessing and
by Hooker and Arnott under their
Brasilensis. But the species needs
a new character; for our speci-
mens, which compare ^(pretty) well with
Gardner's, have slender beaked ~~achyr~~

achenia, and short-petioled or even sessile leaves. These are nearly all radical, and vary in different specimens from ^{oblong} linear or to oval, from denticulate or repand to pinnatifid, from sparsely hairy on the midrib to glabrous throughout. Heads 6 to 8 lines long, narrow. Involucre minutely tomentulose-pubescent when young, at length glabrate; the scales nearly all narrow-linear, obtuse. Beak of the achenia filiform, 2 or 3 lines long.

5. Achyroperon chondrilloides

A. glaucescens indigne glaberrimus; caule folioso stricto mono-oligocephalo; pedunculis elongatis; foliis subcarnosis linearilanceolatis

integerrimis seu obsoletissime
denticulatis, superioribus sub-
amplexicaulis, imis in petiolum
basi dilatatum sensim angus-
tatis; involveri squamis lan-
ceolatis subacutis.

Oreophila Chondrilloides, Don
Muscr. & in Hab. Hook.
Seriola Brasilensis, ^{subvar. b.} Hook. & Arn.
in Comp. Bot. Mag. 1, p. 30.

Hab. Rio Negro, North Patu-
gonia, in saline soil.

Our plant is just that of
Gillies from the Andes of Mendoza,
and of Eichls from the Patagonian
coast, and it appears to be a
very well-marked species, Root
fusiform. Stem from one to three

feet high, more or less leafy to the
branches or peduncles. Sometimes
simple and moncephalous, but
commonly dividing into three or four
peduncles or nearly ^{and simple} naked branches,
from 3 to 9 inches long, terminated
with a rather large head. Involu-
cre 8 or 9 lines long; the outer
scales triangular-lanceolate, acute,
the inner linear-lanceolate ~~from~~
~~a broadis rather~~, tapering from the
base, as long as the disk. Ache-
nia not seen. Leaves 3 to 5 inches
long, 3 or 4 lines wide, thickish,
glaucescent, nearly veinless; the
lowermost tapering to both ends,
the uppermost broadest at the
partly clasping base.

b: Achyrophorus sessiliflorus.

Styprocharis sessiliflora & (var.
vegetior prodoceph.) son-
choides, H. B. K., Nov. Gen. &
Sp. 4, p. 2, t. 301.

Oreophila sessiliflora, Dur in
Linn. Trans. 16, p. 178.

Achyrophorus sessiliflorus. & A.
sonchoides, DC. Prodr. 7, p. 95.

A. Quintensis, Schult. Bip. Sty-
prochar. p. 92; Nodd. Chelr.
Ind. 1, p. 219, t. 41.

A. Quintensis, Humboldtii, alliflorus.
Schult. Bip. Rev. brit. Achyr. ^{l.c.}
p. 18-20.

(Var. β. barbatus; minor; involu-
cri foliolis exteriori phyllis ex-
terioribus superne pl. m. selosis.
A. barbatus, Schult. Rev. brit.
l.c.

Var. *N. subuncinata*: foliis
runcinatis dentatis vel incis
marginibus saepius setuloso-cili
atis; involucri phyllis exteri
oribus oblongis ~~perispermatis~~ ^{seu} obovatis
dorso plerumque setosis vel
nudis. — Subvar. 1. involucri
tomentoso; 2. foliis rhombico-ovatis
longius petiolatis.

A. setosus, Wedd. Chlon. And.
1, p. 220; Schultze Bip. l.c.

A. eriolanus, Schultze, Bip.
l.c.; Wedd. l.c. (involucri
pl. m. tomentoso).

Stat. Crest of the Andes at
Alpamarca, Peru. Vars. β . & γ . (with
rhombico-ovate leaves) in the
Andes above Baños; and a specim
en of the latter with tomentulose
involucri between Casa Blanca
and Bulleray.

From a view of numerous specimens of ~~diff~~ various collections I cannot doubt that all the above are forms of one species, which varies greatly in the size of the head, and the breadth, &c. of the involucral scales. I suspect that it includes A. Meyenianus; and perhaps even the following is an extreme variety.

7. Achyrophorus stenocephalus, ^{Gray.}

Oreophila taraxifolia, ^{ae.} Meyen & Walp. Rel. Meyen, p. 291.

Achyrophorus taraxacoides, Walp. ^{Chlor. Ind. p. 221.}

~~Ann. Bot.~~ ^(Gray, mscr.) p. 335; Wedd. & A. stenocephalus & taraxacoides Wedd. l. c. t. 41.

Var. Y. eriolaemus!

Hub. High Andes of Peru at
Casa Blanca, collected in the same
district by McLean and by Matthews.

Apparently common in the
high Andes of Peru and Bolivia;
distinguished by its small heads,
with a narrow, cylindrical, and
comparatively few-flowered involucre.
^{The leaves vary from dentifoliate to runcinate.}
The ligules, according
to Middell, are pale blue or whi-
tish. ^{Achenia not seen.} Taraxacifolia was the original
specific name of Meyer, which
Nulps, perhaps accidentally, changed
to Taraxacoides, ^{this} ~~which~~ name both
Middell and Schultze cite under
A. Meyenianus as well under the
present species, showing some con-
fusion, to avoid which I have re-
tained the far more appropriate
name I had originally imposed.

Picris, Lin.

1. Picris hieracioides, Lin.

Hub. Bay of Islands, New Zealand;
the P. attenuata of A. Cunningham,
with a stouter form. Hunter's River,
New South Wales; the P. barbarorum
of Lindley and P. squarrosa of
Steetz.

Helmintha aculeata, DC. and
Thrinicia hispida, Roth, were collected
at Madeira. The ray-achenes of the former
are incurved, embraced by the subtending scales of the
involucre, and smooth.

Taraxacum, Staller.

1. Taraxacum Denis-leonis, Desf., var. lavigatum, Hook. f.

Hub. Orange Harbour and Good
Success Bay, Fregia; with both deeply
and obscurely runcinate leaves.

Picrosia, Don.

1. Picrosia longifolia, Don. (Tab.)

Tab. Rio Negro, North Patagonia. Andes of Peru near Baños.

Picrosia longifolia, Don in Linn. Trans.
16, p. 183; Less. Syn. p. 143; Hook.
& Arn. ⁱⁿ Comp. Bot. Mag. 1, p. 32, & 2,
p. 42; DC. Prodr. 7, p. 251; Kemy in
Gay Fl. chil. 3, p. 469.

Tragopogon pitillarioides, Less.
in Linnaea, 6, p. 101.

The pappus is fulvous and
soft, not fragile; and the nearest af-
finity of the genus appears to be with
the North American Pyrrochloa.

(Stamen. 3.)

5. Section of achenium.
6. Embryo.

Plate Picrosia longifolia, Fig. 1.
A flower, 2. Summit of style, 4. Receptacle with an achenium and pappus, (The details variously magnified.)

Sonchus, Linn.

1. Sonchus oleraceus, Linn.

Hab. Lord Auckland Islands,
Bay of Islands, New Zealand, Rio
Janeiro. Rio Negro, North Patagonia;
doubtless introduced from the Old
World. Seemann found it at the
Fiji Islands.

2. Sonchus asper, Vill.

Hab. Sandwich Islands, in the vi-
cinity of Honolulu; doubtless im-
ported.

3. Sonchus tenerrius, Linn.

Hab. Baños, Peru. The same
as Nuttall's S. tenuifolius, from Cali-
fornia, probably doubtless introduced
from Spain.

4. Sonchus squarrosus, DC.

Hab. Madeira, east of Funchal,
Achenia minutely striate-rugulose
transversely.

Microhynchus nudicaulis, ~~Less.~~
Less., and Rhabdotheca spinosa, Walt.
were picked up at St. Jago, Cape
Verde Islands.

Andryala varia, Lowe, in
several of its marked varieties, was
gathered at Madeira.

Hieracium, Linn.

1. Hieracium frigidum, Nedd.

Hieracium frigidum, Nedd. & Chor.

And. 1, p. 225, t. 42.

Hab. Andes of Peru above Obrajillo;
depauperate specimens.

2. Stieracium eriocephalum, ^{L.C.} Wedd.

Onoseris? eriocephala, Benth. Pl.
Hartw. p. 211, ad Stieracium ref. p. 357.

Hub. Andes of Peru above Baños.
Also collected by Matthews. This is
referred to St. erianthum, H.B.K. by
Schultz Bip. in Bonplandia for 1861, p.
173.

~~2. *Theriacum erianthi*~~

Fitchia, Hook. f.

1. Fitchia nutans, Hook. f.

Fitchia nutans, Hook. f. in Land.

Jour. Bot. 4, p. 640, t. 23, 24.

Hub. Tahiti, Society Islands,
at the elevation of 3000 feet; a sin-
gle specimen gathered by Professor
Jana.

This most noble and curious
arborescent Gichoracea was known
only from Elizabeth Island, lat. 26°,
long. 125, about 25 degrees of longi-
tude distant from Tahiti towards South
America, where it was detected by
Mr. Buring. The capitulum (
which is fully two inches in dia-
meter) being male in our single
specimen, as in that of Buring,

~~I can~~ add nothing to Dr. Hooker's
illustration of the genus. The
female plant is a desideratum.
Professor Dana's memorandum
mentions that the plant is a
tree, with yellow flowers. The
^{two} setae of the pappus of the sterile achen-
ia, are better called aristae.

The following Compositae need only to be mentioned:—

Phagnalon saxatile, Chrysanthemum pinnatifidum,

as picked up at Madeira.

Dracopis amplexicaulis, Cass. was gathered at Rio Janeiro;—surely an escape from gardens.

Anthemis arvensis was gathered on the Rio Negro, North Patagonia, and near Valparaiso; an adventive European weed.

Maruta botula: Bay of Islands, New Zealand; "introduced, in waste grounds, but rare." As Dr. Hooker does not mention it in his Flora of New Zealand, it is probably a new comer, but one very likely to establish itself, as it has in the older United States, where it is the very commonest weed—

side used.

Lasiospermum brachyglossum,
Hb. and Manasia trifurcata, were
picked up at Cape Town, Cape of
Good Hope.

Styliacee

Gordaniacee

Campylaceae

Liliaceae

Ord. Stylidiaceae.

1. Stylidium, Swartz.

1. Stylidium graminifolium, Swartz.

2. Stylidium lineare, Swartz.

Stat. New South Wales, near Sydney, &c.; two familiar Australian species.

2. Forstera, Linn. f.

1. Forstera muscifolia, Willd.

Stat. Orange Harbour, Fregia; where it abounds, in moss-like, pulvinate patches.

Ord. Goodeniaceae,

1. Goodenia, Smith.

1. Goodenia bellidifolia, Smith.

2. Goodenia stelligera, R. Br.

3. Goodenia paniculata, Smith.

4. Goodenia pinnatifida, Schlecht.

5. Goodenia hederacea, Smith,

6. Goodenia rotundifolia, R. Br.

7. Goodenia ovata, Smith,

8. Goodenia heterophylla, Smith.

Hab. Sydney, Woolungah, and

Hunter's River, New South Wales,
— To G. Helligera the G. armeria-
folia of Sieber and DeCandolle ap=
pears to belong. The G. hederacea
is the true plant, from which G.
lanata is apparently distinct.

2. Selliera, var.

1. Selliera radicans, var.

Selliera radicans, var. 2c. 5ip.
49, t. 474, DeVriese, Gooden. p.
163; Stork. f. Fl. Fasm. 1, p.
231.

S. repens, ~~De~~ DeVriese, l.c. p. 230.
Goodenia repens (Labill. Fl. N. H. N.
1, t. 76) & G. radicans, DeC.
Prodr. 7, p. 516.

Hab. Chili at Valparaiso. Bay of Island,

New Zealand. Moolungy, New
South Wales.

(Velleia)
3. Velleia, } Smith.

1. Velleia paradoxa, R. Br.

2. Velleia lyrata, R. Br.

Hab. New South Wales; the first
at Sydney; the second on Hunter's
River.

4. Dampiera, R. Br.

1. Dampiera oblongata, R. Br.

2. Dampiera stricta, R. Br.

Hab. Sydney and Hunter's River,
New South Wales.

5. Scavola, Linn.

1. Scavola (Merkhusia) ^{N. Br.} maureolens,

2. Scavola (Merkhusia) microcarpa, Car.

3. Scavola (Merkhusia) hispidula, Car.

Hab. New South Wales, at Sydney,
Woolangone, and Hunter's River.

4. Scavola Lobelia, Linn.; Detmers.

Scavola Karigië, Nahl. Symb. 3,
p. 36; N. Br.; Ob. L. etc.

V. Leschenaultii, Ob. Prod. 7, p.
506.

Hab. Coast of the Freeze, Samoa,
Tonga, and of all the Coral Islands.

5. Scavola sericea, Forst.

S. plumerioides, Nutt. in Trans.
Amer. Phil. Soc. n. ser. 8, p.
252. (var. foliis amplis fere
glabris.)

Stat. Tonga and Samoan
Islands. Wake Island, Sandwich
Island; on the coast of Hawaii
and of Oahu; the latter with
nearly glabrous leaves.

6. Scavola coriacea, Nutt.

S. fruticosa, decumbens; axillis
brevissime barbatis; foliis ^{velis} par=
carnoso-crassis obvato-spa-
thulatis in petiolum brevem
attenuatis aveniis saepe retusis;

pedunculis axillaribus uni-
(raro tri-) floris; calycis limbo
truncato vel obscure quinque-
lobo; corollae lobis ^{linearibus} ~~angustis~~ lan-
ceolatis, alis angustis.

Var. α . cinereo-puberula vel glabul-
la; ^{foliis integerrimis} corollae ^{extus} glabra vel
pilosula, ~~in~~ lobis intus pilo-
so-barbatis.

Scavola coriacea, Nutt. in Trans.
Amer. Phil. Soc. n. ser. 8, p.
253.

Var. β . corollae intus imberbi extus
foliisque glabris.

Var. γ . foliis cinereo-tomentulosis
apice 3-5-denticulatis; corollae
extus pubescente, lobis intus
glabris.

Hab. Sandwich Islands, Var. α .

On the shore of Kauai (Atuai)
Nuttall, and on the sand-hills
of Maui. Var. β . Nihau, and
var. γ . Molokai, Kerm.

A well-marked species,
although varying ^(as to) ~~the~~ the pubes-
cence, which even in the flowers
is inconstant in ~~the~~ other species
of the Sandwich Islands. Leaves
an inch or less in length, inclu-
sive of the petiole or attenuated
base, thick, fleshy, and veinless,
even the midrib obscure, rounded
or retuse at the summit. Peduncle
about half an inch long, or in
var. γ . much shorter. Corolla slender,
8 or 9 lines long, the ^{def} ~~reflexed~~
~~margin~~ induplicate margins
or wings of the lobes narrow
and entire or some times obsolete.
Drupe baccate.

To this perhaps belongs the

Sandwich Island specimen, collected
by Gaudichaud in the voyage of the
Bonite, seen by De Vries in De-
essert's herbarium, and referred to
S. montana; but Labillardiere's
species is a tall upright shrub,
with well-developed lobes to the
calyx.

7. *Scavola Gaudichandi*, ^{Arn.} Hook. &

S. fruticosa, erecta, glabra; ax-
illis breviter barbatis non nudis;
foliis oblanceolatis vel spatula-
lato-oblongis in petiolum atten-
uatis seu rarius denticula-
tis ~~et~~ ^{fere avenis} carnosulo-crassiusculis
~~venis obsoletis~~; pedunculis brevibus
(^{uni-}) paucifloris; calycis limbo trun-
cato obscure quinquelobo; corollae

lobis(alis aestivatione induplicatis
exclusis) linear-lanceolatis.

Scorola montana, Gand. Bot.
Voy. Freyc. p. 460, non
Labill.

S. Gandichandi, Hook. & Arn.
Bot. Beech. Voy. p. 89; DC.
Prodr. 7, p. 507, non S. Gandi-
chaidiana, Cham.

S. Menziesiana, var. glabra,
Cham. in Linnaea, 8, p. 227?

Temminckia Gandichandi, De-
Vriese, Gordon, p. 11.

Hab. Sandwich Islands, Cook,
Gaudichaud, Macrae (no. 27), &c.
Maui, Kerm (no. 304); a form
with narrow and sometime, rather
falcate leaves, answering to the
character by Gaudichaud, Kauai,
and on the southeast coast of

Hawaii, also on the ascent of
Moua Loa; broader leaved
forms.

No specimen of Sandichand's
original plant could be found in
the Paris Herbarium; but Macrae's
and Kuny's plants, above cited,
clearly answer to it. It has
a less developed inflorescence, and
~~smaller~~ narrower, somewhat fleshy-
thickened, nearly or quite veinless
and more entire and smaller
leaves than the following, - of
which polymorphous species, however,
I expect it will yet prove to be
an extreme form. The corolla
is more slender, usually glabrous,
but sometimes sparingly pubes-
cent. The flowers of this and the following
species are white, not yellow as *Delaviesia* implies.
Delaviesia's genus *Terminckia*
is said to differ from *Seavola*
in the inflorescence not being cymose,

nor the filaments bearded, nor
the fruit fleshy (baccate). But not
one of these distinctions is valid.

It would be difficult to find a
more purely cymose inflorescence
than in these species when the
peduncle develops several flowers;
the filaments are equally beard-
less in the original and perhaps
in every known species of Scorvola,
and the mature fruit of the
Sandwich Island species, referred to
Ternstroemia, is a baccate drupe.

8, Scorvola Chamissoniana, Gaud.

Scorvola Chamissoniana, Gaud.

Nod. Voy. Freyc., p. 461, t. 82 (
forma corolla pubescente); Hook.

S. (Chamissoniana Gaud.?) Gaudichau-
diana, Cham. in Linnaea, 8, p. 226;

stirps corolla etc. glabra.

S. Menziesiana, Cham. l.c. p.
227 ^{excl. var. 3} stirps parvifolia, glabra et
pubescens.

S. ciliata, G. Don, Syst. 3, p. 728;
Sc. Prodr. 7, p. 506.

S. ligustriifolia, Nutt. in Trans.
Amer. Phil. Soc. l.c.; forma
foliis minoribus subintegerrimis.

S. pubescens, Nutt. l.c.; forma
pl. m. pubescens.

S. pubescens, Gand. ined. in Herb.
Mus. Par.; foliis junioribus
subtus et inflorescentia mol-
liter pubescentibus; corolla
extus pubescente.

S. intermedia, Gand. ined. in
Herb. Mus. Par.; foliis lan-
ceolatis fere integerrimis
glabris; corolla glabra.

S. Beiliana, Gand. ined. l.c.; forma

foliis majoribus puberulis
rarius serratis; pedunculo
elongato.
Ternstroemia Chamissoniana, ciliata, Ellenriesi-
ana, DeVries, l.c.

Itab, Sandwich Islands; gathered by all collectors. In the present collection ~~the ordinary forms~~ from Oahu, in the mountains behind Honolulu; both smooth and large-leaved forms with slender many-flowered peduncles; and forms with smaller and ^{almost} ~~nearly~~ entire leaves and few flowers. Kauai near Koloa; with lanceolate entire leaves; S. intermedia, Gand. Hawaii; district of Puna and Waimea; with rather ^{rigid and} large oblong-lanceolate leaves, sharply toothed, minutely downy underneath, nearly S. Dielliana, Gand. North bank of the crater of East Maui; like the last, but with broader,

oval-oblong and subsessile leaves,
minutely ~~and sparingly~~ pubescent
beneath; the axils unusually bearded.

The above are evidently forms
of one polymorphous species.

It has thinner and more veiny
leaves than the foregoing, mostly
larger and more toothed; the lobes
of the corolla broader and broadly
wing-margined; the peduncles
usually slender and ~~in~~ often sev-
eral-flowered.

9. Scavola mollis, Hook. & Arn.

Scavola mollis, Hook. & Arn. Bot.

Beech. Voy., p. 89; DC. Prodr., 7,
p. 306.

Ternstroemia mollis, DeVries, Gooden.
p. 12, t. 2.

Itab, Oahu, on the mountains behind Honolulu, where it was collected in Beechey's voyage, also by Gandrich in the voyage of the Brouette. On Kauai, Henry gathered specimens with the leaves somewhat less downy.

Well marked by the soft and dense caescent pubescence or close tomentum of the lower surface of the (large, oblong-lanceolate) leaves, of the short-peduncled inflorescence, and of the exterior of the corolla. The latter has not a particularly long tube, nor are its lobes unusually pointed.

10. Scavola (Camphusia) glabra ^{Hook. & Arn.}

Scavola glabra, Hook. & Arn., Brit. Beechey
Voy., p. 89; DC., Prodr. 7, p. 807; Gand. Voy. p.
Camphusia glabra, De Vries, l.c. p. 15, t. 1.

Hab. Mountains behind Honolulu, Oahu, where it was detected in Bucher's voyage, also by Gandichaud, &c.

The large, solitary flowers, with the ^{upper or less curved} corolla over an inch long, yellow, glabrous, and of a firm texture, give this species a peculiar aspect; but there is nothing of generic consequence. The limb of the corolla is nearly equally five-~~lobed~~ cleft, though some of the divisions are apt to be conglutinate at their base. The anthers are nearly normal for the genus; the connective is similarly produced in the following species, and in S. montana as figured by Labillardiere.

11, Scavola floribunda, Sp. Nov.

S. fruticosa; ramis ~~novellis~~ puberulis ~~max~~ glabratiss; axillis vix barbatis; foliis lanceolato-oblongis subspathulatis submembranaceis repando-dentatis obscure penninerviis glabris basi attenuata sessilibus vel subpetiolatis; cymis multifloris ~~et~~ axillis supremis et terminali thyrsium amplum efficientibus; calycis lobis ovatis oblongisve ovario brevioribus; corolla extus incana, lobis intus glabris oblongis; ~~ind~~ stylo glabro; indusio ciliato extus piloso.

Hab. Looe Islands, at Orolan and Kewa, in clearings, Also collected in the same island by

Sumner, N. H.

Professor Harvey and by Dr. Serrano!

"Stem 6 feet high", woody,
glabrous except at the summit,
the younger axils somewhat bearded ^(the branches very leafy) in leaves thick, but
apparently neither fleshy nor
coriaceous, from 2 to 6 inches
long, smooth and green both
sides, the margins undulate
or repand-toothed, or entire.
Flowers in small pedunculate
cymes from the upper axils, and
in a compound and very many-
flowered terminal one, which
when well developed ^{considerably} exceeds the
leaves, the whole forming an
ample thyrsoid panicle.
Corolla half an inch long,
noary-whitened externally,
smooth within except the upper
part of the tube, which is villous.
Anthers tipped with a blunt appendage.
Fruit drupaceous.

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Ord. Campanulaceae,

1. Wahlenbergia, Schrad.

1. Wahlenbergia linarioides, A. DC.

Hab. Chili, in the vicinity of
Santiago.

2. Wahlenbergia gracilis, A. DC.

Hab. New Zealand, and New South
Wales at Sydney, Wollongong, &c.

3. Wahlenbergia Sieberi, A. DC.

Hab. Sturt's River, New South Wales.

3. Wahlenbergia Peruviana, Sp. Nov.

W. ^{hirtella} ~~hirsutula~~, humilis; caulis

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ramosis diffusis; ramis usque ad
apicem foliosis; foliis ^{alternis} parvis spathe-
ulatis subintegerrimis sessilibus,
summis florae ~~stipantibus~~ bracte-
antibus; calycis tubo hemisphae-
rico hirsuto lobis oblongis brevi-
oribus; corolla brevi-campanulata
ultra medium quinquefida;
capsula semisupera, parte libera
conico trivalvi.

Hab. Andes of Peru above
Baños.

Plant only 2 or 3 inches high,
diffusely branched close to the ground,
apparently from a perennial root;
the herbaceous branches ~~apparently~~
~~rather fragile~~ slender, very leafy
up to the ~~flower~~ solitary terminal
flower, slightly hairy, Leaves only

3 lines long, oblong-spathulate, ^(obtusely) sessile, entire, ~~nerveless~~ veinless, sparsely and minutely hispid, especially on the margins. Flower ~~rather large for~~ Tube of the calyx hemispherical or broadly obconical, about a line, ~~nearly two times~~ ^(densely) long, hirsute; the lobes a line and a half in length, oblong, obtuse, less hairy, in fruit fully two lines long. Tube of the corolla considerably shorter than the lobes of the calyx, which the oblong divisions somewhat exceed. Filaments subulate, thin; anthers oblong-ovate. Style short; stigmas 3, oblong-filiform. Capsule 3 lines long, ovoid-conical; the elongated free summit nearly equalling the lobes of the calyx, and loculicidal. Seeds oval-oblong, very smooth. - The specimens are

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in fruit; only a single flower re-
maining, but they suffice for the
determination of this interesting
addition to the genus *Nahleria*.

Rovella ciliata, Linn. was
picked up at the Cape of Good
Hope.

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Ord. Lobeliaceae.

The principal interest of the collection in this order ~~is~~ relates to the arborescent, shrubby or fleshy-stemmed Lobeliaceae of the Sandwich Islands. The species are numerous and peculiar, but difficult of investigation in herbaria, owing to the imperfection of the materials in collections, and to the injury from insects to ~~the~~ ^{the specimens of} ~~attack~~ which these and other lactescent plants are particularly liable. There are moderately good materials extant of ten or eleven species, and imperfect specimens or indications of ^{about} as many more, and still others are probably to be discovered. Our own materials, which have generally been compared with those in the Stockerian Herbarium, and

with those of Gaudichaud ⁱⁿ ~~part~~
Paris ~~herbar~~ Museum, have been
^{recently} supplemented by a set of the dupli-
cates of M. Kemy's excellent collection.

~~Exclusive of~~ ~~several nominal species, of these~~
Exclusive of ~~two species of Stelia~~,
and ^{of} a striking new Isotoma? (the
latter ~~known~~ only in Kemy's collec-
tion, ~~309~~ ⁶⁰ from Kaurai or Nihari),
the known species of the Sand-
wich Islands may all be referred to
Gaudichaud's genera Stelissea, Cyanea,
and Clemonitica. The only essential
character of his genus Rollandia,
viz. the adnation of the staminal
tube with one side of the tube of
the corolla, is, ^(as) I suppose, a mistake.
At least this does not occur or-
ganically in the plant which
accords with the specimen of
Rollandia lanceolata (now flowerless)
collected in Freycinet's voyage, upon

which Gandichand founded this
genus, nor ^{as} I think (though our
flowers are too much injured to
~~be sure~~ render the observation certain)
in that which equally answers to
~~this R. crispa~~ ^(the) more miserable spe-
cimen of R. crispa. The former
species is a good Delissea; the latter,
having larger and somewhat foliaceous
calyx-lobes, - is one of the species
through which Delissea shades off
into Byanea. To the latter genus
I confidently refer Presl's Macro-
chilus (Lobelia? superba, Cham.),
of which the calyx-lobes are probably
incorrectly said to be imbricated in
anthesis, and also a ^{new and} most remark-
able arborescent species, which by its
extremely long and apparently pe-
taloid calyx-lobes approaches Clerv-
montia; but these divisions are perfectly
separate to the base, ^{spreading in anthesis,} and not deciduous.

1. Delissea, Gand.

Delissea & Kollandia (excl. K.
crispa), Gand. Bot. Voy. Freyc.,
p. 457, 458, t. 74, 76-78; A. DC.
Prodr. 7, p. 342, 344.

1. Delissea lanceolata.

Kollandia lanceolata, Gand.
Bot. Voy. Freyc., p. 458; ~~t. 74~~
Hook. & Arn. Bot. Beech. Voy.,
p. 88, excl. pl. fol. minor. Mac-
rae.

K. montana, Gand. l.c. Ic.
t. 74; folia superiora diminuta,
K. lanceolata B. grandifolia,
A. DC. Prodr. 7, p. 344.

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Hab. Oahu, Sandwich Islands, on the mountains behind Honolulu, where it was first collected by Gaudichaud, and afterwards by Macrae, Lay and Collie, &c.

Gaudichaud's solitary and original specimen, preserved in the Paris Herbarium accords with his character "foliis magnis", these being ^{nearly} a foot and a half long. His plate well represents the lower portion of two such leaves; but the others are much too small. The large-leaved variety of Stokes, and of DeCandolle ^(blue) is the true lanceolata. The ^(blue) flowers in size and shape ~~answer~~ correspond with Gaudichaud's figure, but the staminal column is wholly

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free, as De Candolle has noted,
^{sometimes} or merely sticks fast in the dried
specimen where it comes in con-
tact with the upper side of
the corolla.

To this species perhaps
belongs no. 301 of Kerm's
collection, from Hawaii,
with apparently smaller flowers,
and almost entire leaves more
attenuated below.

Gaud.)

2. Delissea clermontiioides

Delissea clermontiioides, Gaud.
Bot. Voy. Bonite, t. 47.

D. grandiflora, Gaud. in sched.

^{Herb. Mus. Par.}
Kollandia Humboldtiana, Gaud. l.c. t. 76?

Tab. Oahu, Sandwich Island,
on the mountains behind Honolulu.

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A single, insufficient specimen, which appears to agree with the specimens and the figure of ~~the~~ Gandichand's *D. clermontoides*, of which no description has been published. The specific name probably indicates a resemblance of the leaves, ^{and fruit,} ~~and~~ flowers, to those of this author's *Clermontia macrocarpa*, not of the calyx, the lobes of which are small, only a line and a half long. The corolla is externally pubescent in the bud. *D. Kunthiana*, Gand. l. c. t. 77, ^{may be the same species} (as I ~~and~~ suspected) *Rollandia Humboldtiana* also.

3: Delissea Dellessertiana.

Rollandra Dellessertiana,
Sand. Bot. Voy. Borite,
t. 75.

Var. ? pinnatiloba; foliis profunde
sinuato-pinnatifidis, lobis
utrinque 5-7 obtusissimis
integerrimis.

Hab. Mountains of Kauai,
Sandwich Islands.

This is ~~said to be a~~ noted as
a shrubby plant, with few branches,
the the deeply sinuate-pinnatifid
leaves a foot long. Flowers not
seen; so that the determination
is wholly doubtful.

4. Delissea coriacea, Sp. Nov.

D. fruticosa, glabra; foliis am-
 plis (pedalibus et ultra) oblongo-
 lanceolatis coriaceis repando-
 serrulatis basi acutis longi-
 uscule petiolatis, venulis con-
 spicue reticulatis; racemis plu-
 ri floris petiolum haud super-
 antibus; calycis limbo obsolete
 seu dentibus 5 minutis; corolla
 pollicari subcurvata.

Var. B. foliis spatulato-lanceo-
 latis in petiolum brevem longe
 attenuatis, ~~calycis dentibus~~

Hab. Sandwich Islands, Kau-
 ai, Kemy, no. 302; ~~the type of the~~
~~species~~ in flower. North bank of
 bank

The crater of East Maui; ~~in~~
the var. B., in fruit.

The materials, ^{employed} consist of a fine
flowering specimen from Kemy's
collection, received from the Paris
~~Herbarium~~ Museum, to which I
have ventured to join an ~~incom~~
imperfect fruiting specimen of our
collection. The character, exclusive
of the variety, is ^{drawn} wholly from the
former. Its leaves are evidently
crowded at the summit of a thick-
ened stem; the stout petioles are
4 or 5 inches long; the blade fully
a foot long and 3 inches broad, ~~most~~
smooth, of a leathery texture,
with a very strong midrib, the mar-
gin rather obscurely serrulate.
Peduncles axillary, an inch or two ~~in~~
~~length~~ long and with the equally
short axis of the raceme about
~~the~~ as much longer. Flowers

rather numerous and crowded,
pedicels an inch or less in length,
tube of the short, fleshy, the
limb so obsolete that the rather
fleshy corolla appears in the
bud to be a ^{direct} continuation of it;
but the junction may at length
be discerned and usually five
denticuli or minute teeth which
represent the limb of the calyx.
Corolla an inch long, rather
slender, moderately curved in the
bud, becoming straighter, ^{hardly gibbous,} ~~moder-~~
more deeply cleft or fissile on
the back; the five lobes linear-
lanceolate, equal, or the two up-
per ones at length more separa-
ble. ~~Staminal~~ ^{early} column totally
free from the corolla, glabrous, or
nearly so, as are the anthers, two of
the latter strongly ~~bearded~~ penicil-
late at the summit.

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The leaves preserved of the supposed variety from Maui are smaller, a foot long including the short petiole, into which the blade very gradually tapers; the fruit is a globose-ovoid berry, of the size of a garden cherry, its summit showing the vestiges of more evident calyx-teeth.

5. *Delissea* { obtusica
~~puberula~~, Sp. W.

I. suffruticosa; ramis junioribus floribusque undique pubescentibus; foliis membranaceis oblongis serrulatis, apice vel utrinque obtusis subtus parce pubescentibus; racemis plurifloris petiolum gracilem nudo superantibus; calycis limbo fere

obsoletus; corolla gracili sub-
pollicari incurva.

Var. β .? mollis: caule crassiori;
foliis elongatis (subpedalibus)
oblongo-lanceolatis basi in-
petiolum breviusculum attenu-
atis supra puberulis, subtus
molliter pubescentibus; "flores
pollicaribus crassiusculis cauleis".

Hab. Sandwich Islands: The
type of the species in the mountains
of Maui. The ~~double~~ doubtful
variety in the forest on the side
of Mount Kea, Hawaii.

The plant from Maui has the
leaves scattered along the upper
part of a rather slender stem;
the membranaceous blade 5 or 6
inches long by $1\frac{1}{2}$ or 2 inches wide,
elongated-oblong, minutely and rather

sparsely pubescent beneath, nearly glabrous above, all rounded at the summit, but sometimes with a minute point, either rounded, obtuse or acute at the base; the slender petiole $1\frac{1}{2}$ or 2 inches long. Peduncles, pedicels, calyx, and even the slender corolla beset with a close and fine pubescence.

The Hawaiian plant, which for the present may be appended as a variety, has ^{a stouter stem,} (more) downy and elongated (9 to 12 inches long), and less blunt leaves, more ^{more} overlapping at the base, in shape like those of D. lanceolata; and, judging from Dr. Pickering's memorandum, the "blue" corolla ^{larger and} is not so slender. In the specimen the flowers have been consumed by insects.

It is quite possible that both these are pubescent varieties of the following, ^{rather} poly-

morphous species.

b. Delissea acuminata, Gaud.

Delissea acuminata, Gaud.

Bot. Voy. Freyc. p. 457, t. 7b;
Cham. in Linnaea, 8, p. 219;
Hook. & Arn. Bot. Beech. Voy,
p. 88; A. DC. Prodr. 7, p. 342.

Var. β . angustifolia; foliis elongato-
lanceolatis, aut angustis aut
latiusculis.

^(Lobelia)
D. angustifolia, Cham. l.c.; Presl,
Prodr. Lob. p. 47; DC. l.c.

Hab. Oahu, Sandwich Islands,
in the mountains behind Honolulu;
the lanceolate-leaved form, which
was also ~~not~~ collected by Kery, &c.

Doubtless *D. angustifolia*, to which all the specimens in the present collection belong) is merely a narrow-leaved form of *D. acuminata*. The elongated-lanceolate leaves vary from 6 to 9 inches long (~~with~~ ^{on} ~~the~~ petioles of 3 to 5 inches long) and from one to two inches broad; they taper to both ends and are finely and evenly serrate. Calyx-teeth sometimes evident and subulate, often obsolete. Corolla an inch or an inch and a quarter in length, slender, glabrous.

7. *Delissea undulata*, Gand.

Delissea subcordata & *D. undulata*, Gand. Bot. Freye, Voy. Freye, p. 457, t. 77, 78; A. St. L. c.

4

Stat. Oahu, Sandwich Islands,
in the mountains behind Honolulu;
the var. subcordata,

In combining the two species
of Gaudichaud, ~~the~~ ^{the} ~~prefer~~ the name
undulata is preferable. While some
leaves are subcordate others on the
same stem are either rounded, obtuse,
or acute at the base. The flowers
are glabrous, but the calyx, &c. as
in other species, is sometime, more
or less pruinose. The corolla in
our flowering specimen is unusually
large, i.e. ^{in the form with cordate leaves} from one and a half to two
inches in length. I have observed the
small protuberances represented by
Gaudichaud upon the corolla of I.
undulata; but they are inconstant.
No. 300 of Kunz's collection exhibits
three varieties of this species, all
from Kauai or the adjacent island
Nihoa, viz. I. undulata, Gaud., with

lanceolate or deltoid-lanceolate
leaves, and a very thick, fleshy,
scarred caudex; the ~~var~~ subcor-
data, with broader, subcordate leaves,
and a still thicker fleshy caudex;
and a form with a much less
thickened stem, and ^{barely} repand-toothed
leaves much attenuate at the
base.

41.
8. *Delissea*? *platyphylla*, Sp. M.

D. ? caule fruticoso ^{regali} pe-
toliisque tuberculis ^{aculeisve} ~~spinescentibus~~
conicis mollibus obsitis; foliis
sesqui-bipedalibus, obvalo-ob-
longis repandis ^{membranaceis} glabris; pe-
dunculis axillaribus brevibus
crassis paucifloris; lobis ^{glabri} catycis
brevissimis subulatis.

Hab. Sandwich Islands; in
forests of the District of Puna, Hawaii.

This is recorded as having a
simple stem, about five feet
high, beset with short ~~and~~ soft
spines or tubercles which are so soft
that they almost disappear on
drying. The ample leaves are
from one to two feet long and 7 or 8
inches broad, smooth, membranaceous,

and viny, the midrib and larger
veins beneath ^{often} bearing a few
small and weak prickles. The
flowers not seen; but a short
axillary spur or ~~bract~~ thick
peduncle, like that of some
species of *Delissea* bears two or
three ^{pedately} turbinate, forming fruit,
evidently fleshy. The truncate border
furnished with five very short calyx-
teeth; on which account I refer the
plant to *Delissea*, although the
fruit is ~~evidently~~ rather that
of *Cyanea*, and the resemblance to *Gon-*
dichaulis *Rollandia crispa* not remote.

A very similar species was
observed in the forests ^{(at the foot} of *Mount*
Kea, but with ~~out~~ less ample leaves
and no tubercles; the materials wholly
insufficient for description.

2. Cyanea, Gaud.

Cyanea, Gaud., Bot. Voy. Freyc.,
p. 457, t. 78; Endl. Gen. p.
512; A. DC. Prodr. 7, p. 343.

Macrochilus, Presl, Prodr.
Lob. p. 47; Endl. Gen. p. 513;
DC. l.c.

1. Cyanea Grimesiana, Gaud.^{l.c.}

Var. β . citrullifolia; foliis bipin-
natispartitis, lobis segmentis
sinuatis; caule aculeis conicis
creberrimis horrido.

Hab. Sandwick Islands; on the
mountains of Oahu, Var. β . Ha-
waii, in the forests of Mouna
Kea and Mouna Kea.

The corolla, instead of blue, as
originally stated, was marked by Gaud-
ichaud, in his note upon the speci-
mens gathered in the cruise of the
Bourne as bluish-rose-color; and is
said by Nuttall (in Trans. Amer. Phil.
Soc. l.c. p. 252) to be "white, externally
striped with dark reddish-purple."
In our specimens the unexpan-
ded corolla is ^{much} more curved than

in Gandichand's plate; and the
lobes of the calyx are much nar-
rower, linear, a little over an inch
long and two lines broad, valvate
in the bud, with the margins
slightly reduplicate, and plane.
But in other ^{the calyx} specimens from which
the corolla has fallen is shorter,
only 7 or 8 lines long, broader, and
with the margins more or less crisped,
as represented in the published figure.
The foliage is so variable that
the Hawaiian specimens ^{for the present} must be
deemed to be only a variety, although
~~the~~ its blossoms are unknown.

2. *Cyanea aspera*, Sp. Nov.

C. foliis oblongo-ovatis acumina-
tis denticulatis subtus ad venas
venulasque fusco ochraceo-hir-
tellis utrinque setulis basi
papilloso asperatis, petiolo
muricato; calycis glabri lobis
ovalibus ^{obtusissimis} ~~post anthesin accrescen-~~
foliaceis tubum elongato-oboni-
cum aequantibus; corolla 2½-pollica-
ri curvata.

Hab. Sandwich Islands; on
the mountains of Oahu, behind
Honolulu, at the elevation of 2000
feet.

The single specimen is so greatly
injured by insects that I can ~~only~~
barely verify the memoranda of
Dr. Pickering. I cannot doubt
that it is a congener of *Cyanea*
Grimesiana, although with undi-

vided leaves, and it seems to be
related to the three ^{Lobelia} ~~species from~~
Chamisso from Oahu, which
Presl and DeCandolle have attached
to Delissea. The leaves are
9 or 10 inches long, 4 or 5 inches
wide, thickish; the very conspic-
uous veins and veinlets of the lower
surface beset with short yellowish-
brown hairs and also aculeolate,
as is the upper surface generally,
with yellowish pointed tubercles or
short ^(from a) setae) dilated conical base;
the midrib beneath and the thick
petiole are still more aculeolate,
as probably are the branches, in the
manner of C. Grimesiana. Ovary
5 or 6 lines long, acute at the base;
the broad calyx-lobes apparently of
~~about~~ nearly the same length, or
becoming so. According to the memorandum
the latter are short and obtuse, subse-

quent by enlarging or becoming folia-
ceous. Corolla apparently as large
as that of *C. Grimesiana*.

Leaves were collected ^{of an allied} apparently allied
species, ~~without flowers~~ but ^{destitute of} prickly points.

3. *Cyanea*? *pilosa*, sp. nov.

6. ? caule frutescente; foliis (sub-
pedalibus) membranaceis obva-
tis utrinque acutis vel acumi-
natis crosso-crenatis pilis brevibus
mollibus hirsutis; racemis bre-
vibus in pedunculo ^(1-2-3-sollicariis) hirsutissimo
paucifloris; floribus "parvis griseo-
caeruleis" pedicellisque glabris;
lobis calycis linearibus foliaceis
ovario oblongo, aequilongis.

Hab. Hawaii, Sandwich Islands,
on the ^{windward} side of Mouna Kea at the
lower margin of the forest.

Described from an imperfect
specimen, having only a few young

flower-buds, aided by Dr. Lichner-
ing's memoranda. This species, like
the preceding, is evidently allied to
Chamisso's Stelia calycina, am-
bigua, and pinatifida, referred by
Pohl and De Baudelle to Delissea,
but which by their foliaceous calyx-
lobes, seem to affect a transition
to Cyanea. The present species,
and the next seem altogether am-
biguous. It must be left for better
materials to determine the proper
characters and limitation of these
genera.

4. Cyanea Hollandia.

C. fruticosa; foliis sesqui-tripeda-
libus obovato-lanceolatis basi
inferne longe attenuatis bre-
viter petiolatis membranaceis

fere glabris margine serrula-
tis undulatis vel integerrimis;
pedunculo petiolum adaequantem
superne bracteato pauci-
floro; floribus cinereo-puberu-
lis; calycis lobis oblongis
~~seu~~ seu lanceolatis foliaceis
ovario ~~oblongo~~ aequilongis;
corolla sesquipollicari; fructu
pyriformi pollicari.

Kollandia crispa, Gand.
Bot. Voy. Freyre. p. 459.
Lobelia calycina, Cham. in
Linnaea, 8, p. 222?

Stat. Oahu; on the moun-
tains behind Honolulu.

A comparison of our speci-
men with the imperfect original
one shows this to be Gandichaud's
Kollandia crispa, which specific

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name, however, ~~is not a good~~
would mislead. ~~Although the~~
~~lobes of the calyx are smaller~~
the affinity of the species is evident-
ly with the following species,
although the lobes of the calyx
are smaller. They are ~~anther~~ folia-
ceous and persistent, but only about
three lines in length. The corolla
is minutely pubescent externally,
fissile down the back,
the and within free from the stam-
inal column. ^{Two of the anthers only penicillate-bearded,} Fruit about an
inch long when full grown,
cinereous or carescent, obovate-
pyriform. Although this does
not ~~also~~ accord throughout with
the description, it may prove
not specifically different from
Chamisso's Lobelia calycina.

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25th Aug. 1891
no 7

5. *Cyanea tritomantha*, Sp. Nov.

C. Caule simplici arborescente
ergyali; foliis lato-lanceolatis
membranaceis subintegerrimis
fere glabris basi acutis tri-
pedalibus (incl. petiolo crasso
5-8-pollicari); "floribus confertis";
magnis; calyce pubescente,
lobis linearibus pollicaribus
foliaceis ~~sub oblongo~~ ovario
cylindraco longioribus; corolla
tripollicari extus tomentoso-pu-
bescente in segmenta 3 longo-
linearia max ~~partita~~ divisa.

Hab. Hawaii, Sandwich Isl-
ands, in the forests on the ^{windward} side
of Mouna Kea, at an elevation of
3600 feet. One of the great leaves and
one or two flowers and flower-buds

of this striking species are preserved in the collection. The fruit is unknown. The habit of the plant is that of the following species; the simple ~~stem~~ or trunk rising to the height of six feet, and bearing a crown of the ample leaves at the summit. The flowers are said in Dr. Pickering's notes to be "crowded at the base", probably in axillary clusters. The pedicels are ^{bibracteolate}; an inch long, the cylindraceous or oblong calyx-tube or ovary 7 or 8 lines long; the calyx-lobes an inch long, rather less than two lines wide, acutish, valvate in aestivation, cleft down to the ovary, apparently persistent, corolla slender, about 3 inches long, ^{curved}, externally more thickly pubescent and cinereous than the calyx, in anthesis ap-

parently at once separating almost
to the base into three long and
narrow divisions, ^{which are blue internally;} the middle one
a little broader than the lateral
ones, its ~~summit~~ apex seemingly
entire. Column somewhat exceed-
ing the corolla; ^{tube of} filaments ^{and slightly} minutely
pubescent; anthers over half an
inch long, the two shorter ones
strongly penicillate at the summit.

b. Cyanea superba.

Lobelia superba, Cham. in Lin-
naea, 8, p. 223.

Macrochilus superbus, Presl,
Prodr. Lob. p. 47; A. St. Prodr.,
7, p. 341.

Stat. Canu, on the mountains
behind Honolulu, where it was
discovered by Chamisso.

It is much to be regretted that the specimen of this striking species, - consisting of a leaf and a single inflorescence presenting only withered flowers, and much injured by insects, - though sufficient to identify the species, adds nothing to Chamisso's incomplete account of it. Dr. Pickering notes that the woody stem is eight feet high; the ^(as in the specimen) leaves, $2\frac{1}{2}$ feet long, including the petiole, oblong-lanceolate; the rather small flowers crowded in a sort of woolly capiculum at the end of ~~a~~ long, foliaceous-bracteate, nodding peduncles. The ~~perianth of the~~ ^{withered corolla} ~~cat~~ densely canescent-tomentose externally, split down the back, five-lobed at the summit. Probably the lobes of the calyx are not imbricated in aestivation, as Endlicher states, but valvate, as in the allied species,

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7. *Cyanea leptostegia*, Sp. Nov. (Tab.

C. glabra; foliis ad apicem
caulis arboris simplicibus con-
fertis lanceolatis subsessilibus
^{undulatis} integerrimis (bipedalibus et ul-
tra); racemis brevissimis con-
fertifloris; calycis segmentis
prolongis angustissime lineari-
bus e basi ^{conspicue} latiori patentibus
corolla gracili longioribus
persistenteribus.

Hab. ^{near} Upper edge of the forest, ~~on the~~
~~the summit of~~ ~~the mountain of~~ Kanai, Sand-
wich Islands; at an elevation of 37000
feet. A most remarkable spe-
cies, evidently a congener of the
foregoing, but with extraordinarily
long and narrow calyx-lobes. Its
crown of long and narrow leaves
(each two feet or more in length,



2 1/2 inches wide, nearly sessile and entire, smooth, and rather coriaceous, surrounding a thick arborescent stem of 8 to 15 feet in height, giving the plant a Palm-like or Dracenaoid aspect. The racemes are short ^{and dense}, subcapitate, ~~apparently~~ ^{clustered in} short peduncles, ~~from~~ the axil of the leaves. Bracts and bractlets filiform-linear. Pedicels less than an inch long. The gravid ovary or young fruit 7 or 8 lines long, fleshy, pentangular? oblong, acute at the base, glabrous, as is the whole flower, its truncate summit bearing the five divisions of the calyx, which are fully two inches long but less than half a line wide, except at the and near their insertion, apparently of the same texture as the corolla, but more persistent, perhaps remaining on the fruit. Corolla an inch

and a half long, smooth, rather slender, cleft to the middle on the back, the five lobes equal and narrow. Column as long as the corolla; slender; two of the anthers penicillate at the summit. The inflorescence preserved ^{long} in past anthesis, but the organs all remain, although the corollas are withering, ~~and partly~~. This species makes an approach to *Glermondia*; ~~in the~~ but the divisions of the calyx separate at ^{down} neck to the ovary, and are divergent and persistent.

3, Clermontia, Grand.

1. Clermontia grandiflora, Gand.

Var. a. *brevifolia*: foliis membranaceis ovatis leviter obovatis ovatisve ~~sen oblongis~~ utrinque angustatis vel acutatis modice serratis 2-3 bi-tripollicaribus, petiolo gracili pollicari.

Clematis grandiflora, Gand.

Aoy Bot. Voy. Freyc., p. 459,
t. 73; *Florispl. icunensis*, amplificalis, it.
De Prodr., 7, p. 342.

Var. *B. oblongifolia*: foliis oblongis
seu elongato-oblongis saepe ob-
tusis deorsum attenuatis repau-
do-serratis 4-6-pollicaribus, petiolo
bi-tripollicari.

Clermontia persicifolia & C. oblon-

gipolia, Gand. l.c. t. 71, 72;
Dc. l.c.

Var. longifolia: foliis subcoria-
cis seu membranaceis oblongo-
lanceolatis seu anguste
oblongis creberrime serrulatis
3-9-pollicaribus ^{basi} in petiolum
1-2-pollicarem attenuatis.

Clermontia grandiflora, Hook. &
Arn. Bot. Beech, p. 88, adn.
C. Kakeana, Meyen in Pust
Prodr. Lb. ex Dc. Prodr.
l.c.; Walp. Rel. Meyen, p.
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C. macrophylla, Nutt. in
Trans. Amer. Phil. Soc. n.
ser. 8, p. 251.

C. macrocarpa, Gand. Bot.
Noy. Bonite, t. 49.

C. viridis, Gand. ined. in Herb.
mis. Dar.

~~Thaussia lanceolata, Herb. & Bot. Beech, quadr.~~
~~Thaussia, A. Macrae, Gand.~~

Hab. Sandwich Islands;
the var. α , on Oahu, Molokai
(Kenny), and on the western di-
vision of Maui, where our natur-
alists collected it, Var. β , Oahu,
on the mountains behind Honolulu,
and (foliage only, intermediate
between this and the next variety)
on the mountains of Kauai, Var.
 γ , Oahu (Macrae, (Gaudichaud),
(Meyen), (Nuttall)) and
Hawaii, at various stations.

Without question Gaudichaud's
three original species are all
forms of one. The flower of
his C. grandiflora is exaggerated
in the figure, at least it is rather
larger and much broader than
in his specimen. As to the
separation of the lobes of the
calyx down to the ovary, in his
C. oblongifolia, this often occurs,
with age, in other forms. The

Plant forms a shrub or low tree,
8 to 16 feet high, with green or
greenish flowers two or three
inches long, and ~~a~~ bright orange-
colored berries, which, according to
Nuttall, and to Gaudichaud's plate,
are as large as a crab-apple ^{when full grown,}
at least in the last-named variety.
This form, seen in isolated
specimens, might claim to be
distinct; but it ^{evidently} passes into the
others, and must, I suppose, be
regarded merely as a variety
of a polymorphous species.

ined.

2. Clermontia parviflora, Gaud.

C. fruticosa, glabra; foliis mem-
branaceis lanceolato- vel sub-
spatulato-oblongis breviter
acuminatis crebre repando-ser-
nulatis; ~~in petiolum gracilem~~
~~angustatis~~; pedunculo pau-
cifloro pedicellisque brevibus
petiolum haud superanti-
bus; floribus ^{vix} fere pollicaribus
leviter curvatis. "caeruleis"; calyce
breviter quinquelobo corollam
hinc alte fissam aequante,

"Clermontia Byroni, pyrifolia,
seu parviflora, Gaud. nuss. in
Herb. Mus. Par.

C. oblongifolia, Hook. & Arn. Bot.
Beech. Voy. p. 88, adn., non
Gaud.

Kab. Hawaii (and Oahu?)
^{Myers Bay, Mr. Diell.}
Macrae, Gardner, S. J. in the
forests on the slope of Mouna Kea.

This is noted by Dr. Pickering
as "a branching shrub, 10 feet high,
with small, blue, axillary flowers.
The size of the latter, hardly an
inch long and proportionally
slender, well distinguishes the
species. The leaves are thin, $3\frac{1}{2}$ to
5 inches long, the base narrowed
into a slender petiole of an inch
or an inch and a half in length.
Immature berry ovoid or globular,
3 or 4 lines in diameter.

4. Sclerotheca, A. D. C.

1. Sclerotheca arborea, A. D. C.

Labelia arborea, Sparm.; Forst.
Prodr. p. 58, & ^{Guillemin} mss. in Reeph.
Faun. p. 48.

Stat. Tahiti, Society Islands; in
mountain forests.

The specimens consist only of
foliage and some fruit, and
therefore throw no additional
light upon the genus. The
leaves of these specimens are
not "ovate-oblong" as stated in
Forster's Prodr. nor "ovate-
acuminate", as stated by A. De Can-
dolle, but more nearly "ovate-
lanceolate" as in Forster's descrip-
tion printed by Guillemin; in
fact they are oblong-lanceolate,
with an acute base, and from
5-10-12 inches long, not "dentate"
but denticulate and some of them
"obscurely serrate". Capsule over
half an inch long, turbinate, of
a hard texture, abruptly and con-
spicuously pointed by the persistent
and undurated base of the style,
at the ~~side~~ base of which each

cell tardily opens by a small pore. Seeds very numerous, globular; the reticulated testa muricate-roughened. The fruit in Forster's specimens is globose,

~~5.~~ Colensoa, Hook. f.

1. Colensoa physaloides, Hook. f.

Colensoa physaloides, Hook. f.

Fl. N. Zeele, 1, p. 156.

Lobelia physaloides, A. Cunningham.

Bot. N. Zeele; Ob. Prodr. 7, p.

785; Hook. &c. Pl. 1, 555, 556.

Hab. Bay of Islands, New Zealand; in fruit, exhibiting the baccate character.

~~6.~~ Pratia, Gaud.

1. Pratia repens, Gaud.

Hab. Orange Harbour, Fuzgia; very common.

2. Pratia longiflora, Hook. f.

Stat. High Andes of Chili above Santiago, ~~and~~ near the snow line.

To this species, judging from Noddell's description and figure, belongs P. oligophylla, Nodd., of the Bolivian and Peruvian Andes.

3. Pratia angulata, Hook. f.

Stat. Waiaruru Bay, New Zealand. Also, var. arenaria, Hook. f. (P. arenaria, Hook. f. Fl. Antarc. 1, p. 41, t. 29), Lord. Auckland Islands, both with nearly sessile flowers, as figured by Dr. Hooker, and with peduncles equalling or slightly exceeding the leaves, half an inch or more in length.

7. Parastranthus, Don.

1. Parastranthus luteus, A. DC.

Stat. Cape of Good Hope near
Cape Town. Also "Sydney," New
South Wales! The latter in fine
specimens, somewhat different in
aspect from those of the Cape; and,
although not so noted I imagine the
specimens must have been culti-
vated.

8. Centropogon, Presl.

1. Centropogon Surinamensis, Presl.

Stat. Vicinity of Rio Janeiro,
Brazil.

9. Lobelia, Linn.

1. Lobelia urens, Linn.

Stat. Madeira, ^{(in the mountains} near Santa
Anna.

2. Lobelia Erinus, Linn.

3. Lobelia coronopifolia, Linn.

4. Lobelia triquetra, Linn.

5. Lobelia pinifolia, Linn.

Stat. Cape of Good Hope, in the
immediate vicinity of Cape Town.

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6. Lobelia gibbosa, Labill.

Hab. Hunter's River, New South
Wales; often with toothed or some-
what lacinate leaves, the L.
simplicicaulis of K. Brown.

7. Lobelia purpurascens, K. Br.

Hab. Hunter's River, New South
Wales,

8. Lobelia gracilis, Andr.

Hab. Sydney, New South
Wales. Also ticketed from New
Zealand, but probably through a
mistake, as has occurred in some other
instances.

9. Lobelia anceps, Thunb.

2

Stat. Woolangung and Hunter's River, New South Wales,
Bay of Islands, New Zealand.

It ranges from the Cape of Good Hope round to ~~the~~ Chili.

10. Lobelia thapsioides, Schott.

Stat. Brazil, in the Organ Mountains, near Rio Janeiro. —
The raceme is fully two feet long;
The seeds are flat, orbicular, smooth
and wingless. ~~The~~

~~var. ^{A.} ~~β.~~ ~~γ.~~ ~~δ.~~ ~~ε.~~~~

11. Lobelia decurrens, Cav.

Stat. Obrajillo, Peru; the
^{Peruvian} Var. ~~β.~~ A. & B. Prodr. with the
calyx minute.

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4 Am.

12. *Lobelia macrostachys*, Hook.

Lobelia macrostachys, Hook. 4 Am.
Bot. Beech. Voy. p. 88; Gand.
Bot. Voy. Bonite, t. 46.

Hab. Sandwich Islands; on
the mountains behind Honolulu,
Oahu, at the elevation of 2500 or
3000 feet; where it was detected
in Beechey's Voyage, and by Gandi-
chand in that of the Bonite.
Also Hawaii, in the vicinity
of the crater Laa Pele.

The tall stem branches; the
branches terminating in a virgate,
~~raceme~~ rather leaf-bracted raceme.
^{Sides of the calyx water-oblong, rather shorter than the}
from 6 to 12 inches long, ^{terminal} (ovoid)
when developed. 2 to 3 inches long.
^{according to Dr. Pickering, the summit tinged with lilac.}
rather slender, curved, pale; the
lobes slender, narrow-linear. The

mature fruit and therefore the dehiscence are unknown; but the thin-walled pericarp evidently indicates a capsule. Gandichand's figure exhibits flower-buds only. Full-formed flower-buds in our specimens are an inch and a half or two inches long, and mostly recurved.

13. Lobelia Gandichandii, A. DC.

Lobelia Gandichandii, A. DC.
Prodr. 7, p. 384; Gand. Bot.
Voy. Bonite, t. 45.

Var. B. Kaigensis: racemo puberulo; calycis viscosi lobis ~~transversis~~ brevioribus ^{i.e.} tubo paullo longioribus.

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Hab. Sandwich Island; mountains of Oahu, with the preceding, not flowering. Var. β , Mountains of Kauai.

In the very good figure of this striking species which Gandichand has given, as to the Oahu plant, ^(in many and) that the thick stem, covered with cicatrices, is a foot high; the leaves crowded at ~~the~~ its summit are coriaceous, linear or lanceolate, from 4 to 8 inches long, nearly veinless; the narrowly revolute margins entire or obscurely denticulate; the midrib beneath often strigose or hirsute. Some of this hairiness is represented in Gandichand's figure. ^(in Gandichand's plant) The capsule is dehiscent at the conical free summit.

The variety from Kauai

produces leaves a foot long and an inch or more wide; the raceme, compressed-paniculate pedicels and flowers like those of *L. Gaudichaudii*, except that the former puberulent, and the lobes of the "viscous" calyx are shorter and proportionally broader, being triangular-oblong and 3 or 4 (instead of 5 or 6) lines long, ^{turbinate} both. They are deciduous from the forming fruit. The "showy, broad, and curved corolla" is said to be "pale, with pink veins".

14. *Lobelia neriiifolia*, Sp. Nov.

L. caule fruticoso crasso medulla farcto; foliis confertis elongato-linearibus utrinque angus-

Latius in petiolum attenu-
atis coriaceis transverse ve-
nosis margine integerrimo
revolutis supra glabris subtus
incanis; racemo virgato densi-
floro; bracteis calicis lobisque
calycis subulato-setaceis;
corolla rectiuscula carnea,

Tab. Sandwich Islands;
on the mountains of the East
Division of Mani. Also on the moun-
tains of Kanal, according to Dr. Pickering's memoranda.
The L. mericifolia of Morris
being a synonym of L. or Tupa
salicifolia, that name is free
to be used for the present remark-
able species. The plant evi-
dently has a thick stem or
erect caudex, like that of L.
Gaudichaudii, but its size is
not recorded. The leaves are a
foot or less in length, only 4 or 6

lines wide, of a firm texture,
veined in the manner of *Nerium*,
the lower surface whitened with
a fine and close-matted down.
The ^{dense and} virgate raceme sometimes
has a short pithy axis. Bracts
about an inch long, mostly
exceeding the flattish pedicels,
setaceous or nearly so. Lobes of
the calyx ^{narrowly} ~~setaceous~~ subulate, longer
than the ~~tubinate~~ ^{pubescent-caryophyllous} tube. Corolla
an inch long, narrow, "deep blue",
rather slender, cleft ~~down one side~~
in the manner of the genus, the
two upper lobes at length nearly
separate, narrowly linear. Two
at least of the anthers bearded at
the tip. Capsule turbinate, 3 lines
long, rather longer than the chiefly
persistent calyx-lobes, ^{two-celled} ~~five~~ dehiscent
through the short, obtusely conical

vertex, at ~~length~~ length partly
four-valved, seeds oblong, com-
pressed, smooth, wingless. - The
fruit-bearing raceme of the col-
lection is of a former season;
another, in flower, has unfor-
tunately been almost consumed
by insects. The leaves, ~~although~~
although vastly larger, bear
considerable resemblance to
those of L. rosmarinifolia Presl,
Diphycampyus rosmarinifolius,
Don.

15. Lobelia (Tupa) salicifolia, Sweet.

16. Lobelia (Tupa) polypphylla, ^{And.} Hook. &

Citab. Chili, in the vicinity
of Valparaiso.

10. Siphocampylus, Pohl.

1. Siphocampylus betulifolius, Don.

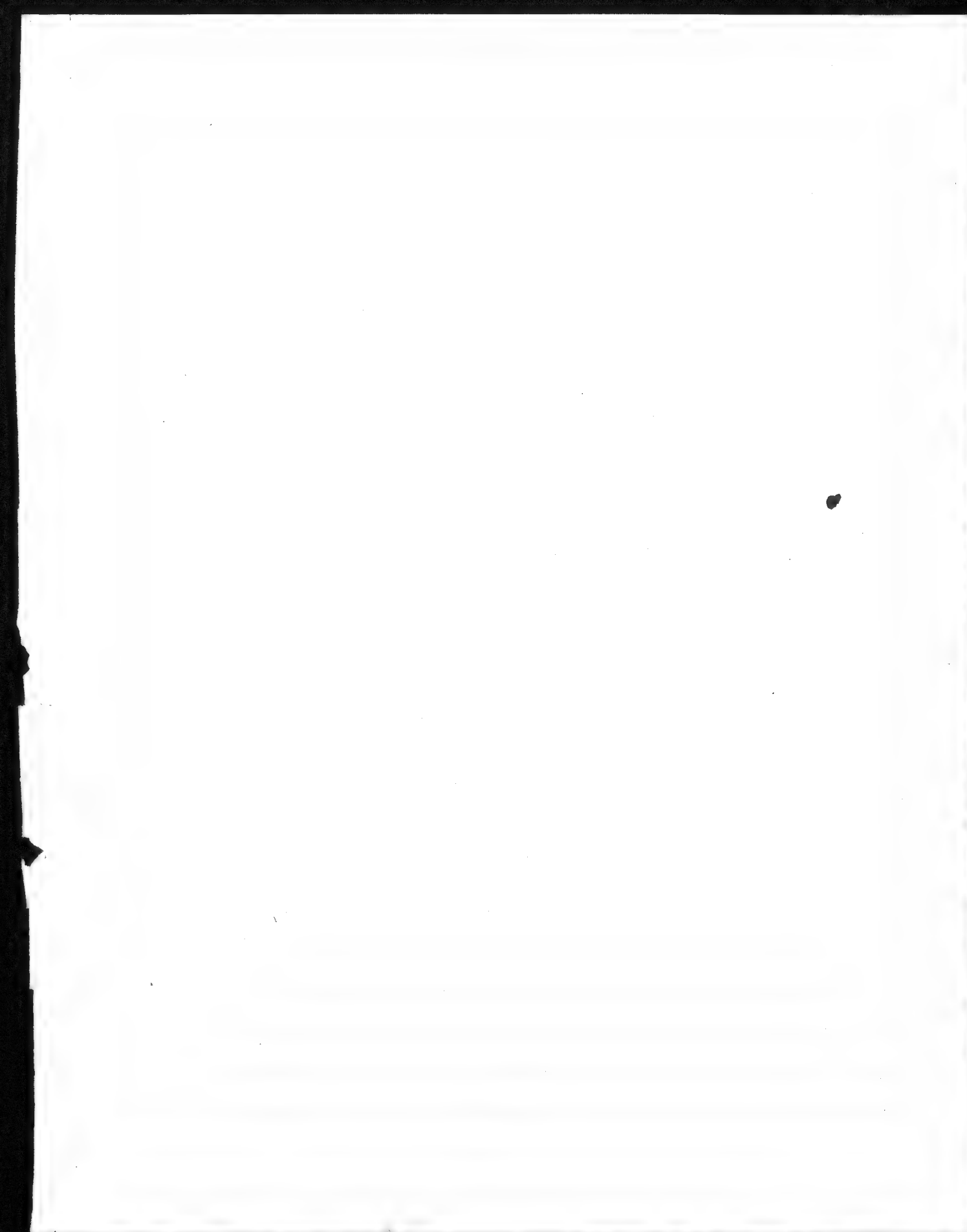
Hab. Brazil, in the Organ Mountains near Rio Janeiro.

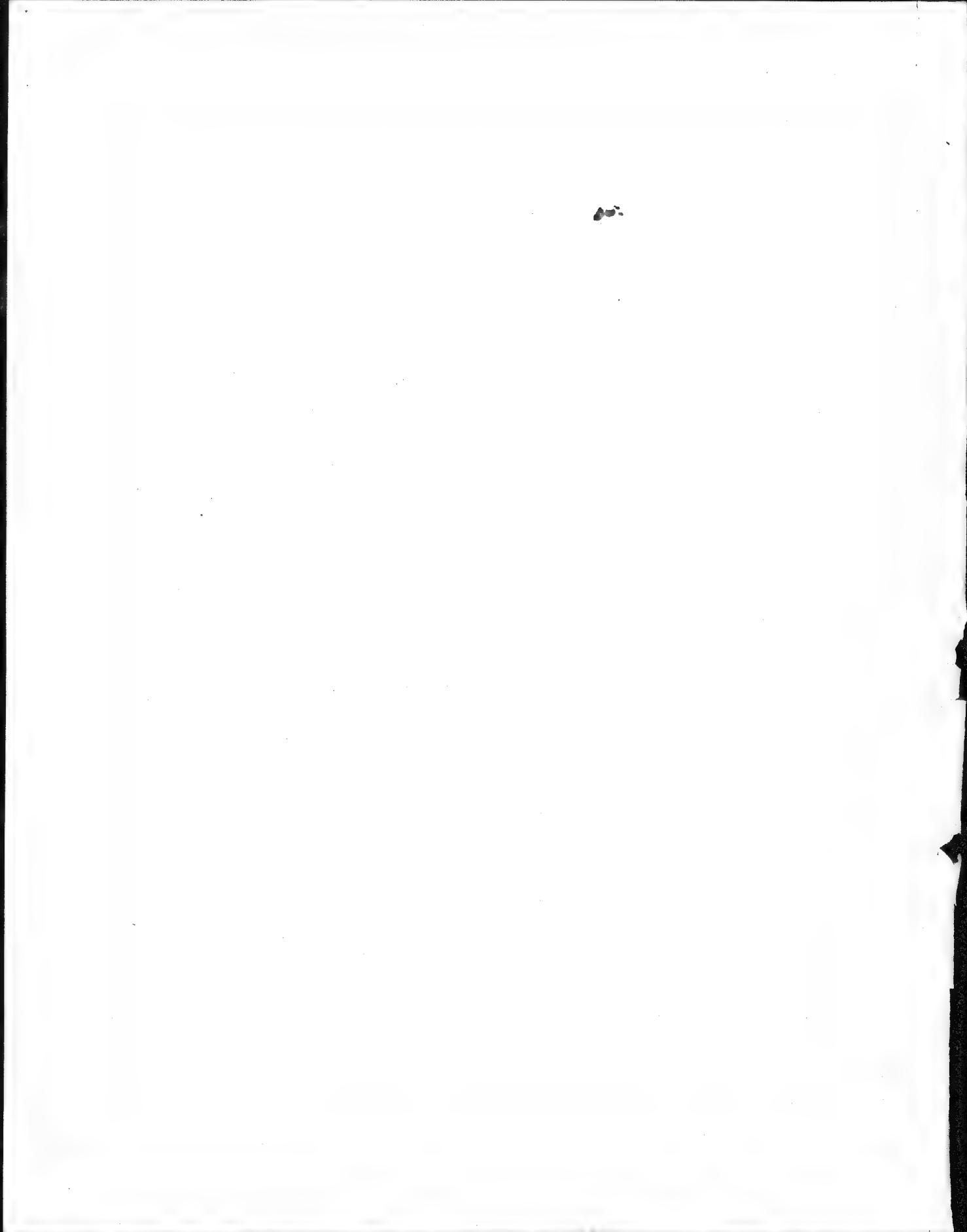
11. Isotoma, Lindl.

1. Isotoma senecioides, A. DC.

Hab. Hunter's River, New South Wales.

In Kermadec's Sandwich Island Collection (no. 309 ter, from Kauai or Nihaue) is a wholly new and striking Isotoma, with fleshy stems and large obovate entire leaves, which will probably be described by the Parisian botanists.





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Spilargis & benedicti



The italicising marks in the English
descriptions in this list are to be dis-
regarded by the compositor,
A.G.

The Sandwich Island appears to be
revised in accordance with the notes
printed in *Proceed. Amer. Academy*
1862-2.

Ord. Ericaceae.

Subord I. Vaccinieae.

1. Vaccinium. Linn.

1. Vaccinium Maderense, Link.

Hab. Madeira; at the elevation of about 3000 feet above the sea.

This species and the allied *V. Arctostaphylos*, enumerated by Klotzsch, in *Linnaea*, 24, p. 65, among the "non satis notae," having simply five-celled berries, awnless anthers, and at length campanulate corollas, must be referred to the section *Vitis-Idaea*, notwithstanding their deciduous leaves. The tubes of the anthers are remarkably long.

2. Vaccinium cereum, Forst.

V. foliis confertis rotundis ovalibusve mucronatis callosis serratis coriaceis reticulato-venosis glabris; pedunculis axillaribus foliis brevioribus infra medium bibracteatis; calycis lobis ^{triangulatis} ~~acutis~~; corolla urceolato-cylindrica quinqueangulari; antheris basi minute mucronatis, ~~pressuratis~~ ~~tubulis~~ ~~antherarum~~ loculis ~~parvis~~ ~~brevi-~~

~~V. aquilongis~~
~~aristas dorsales breviter~~ ^{Paullo} superantibus.

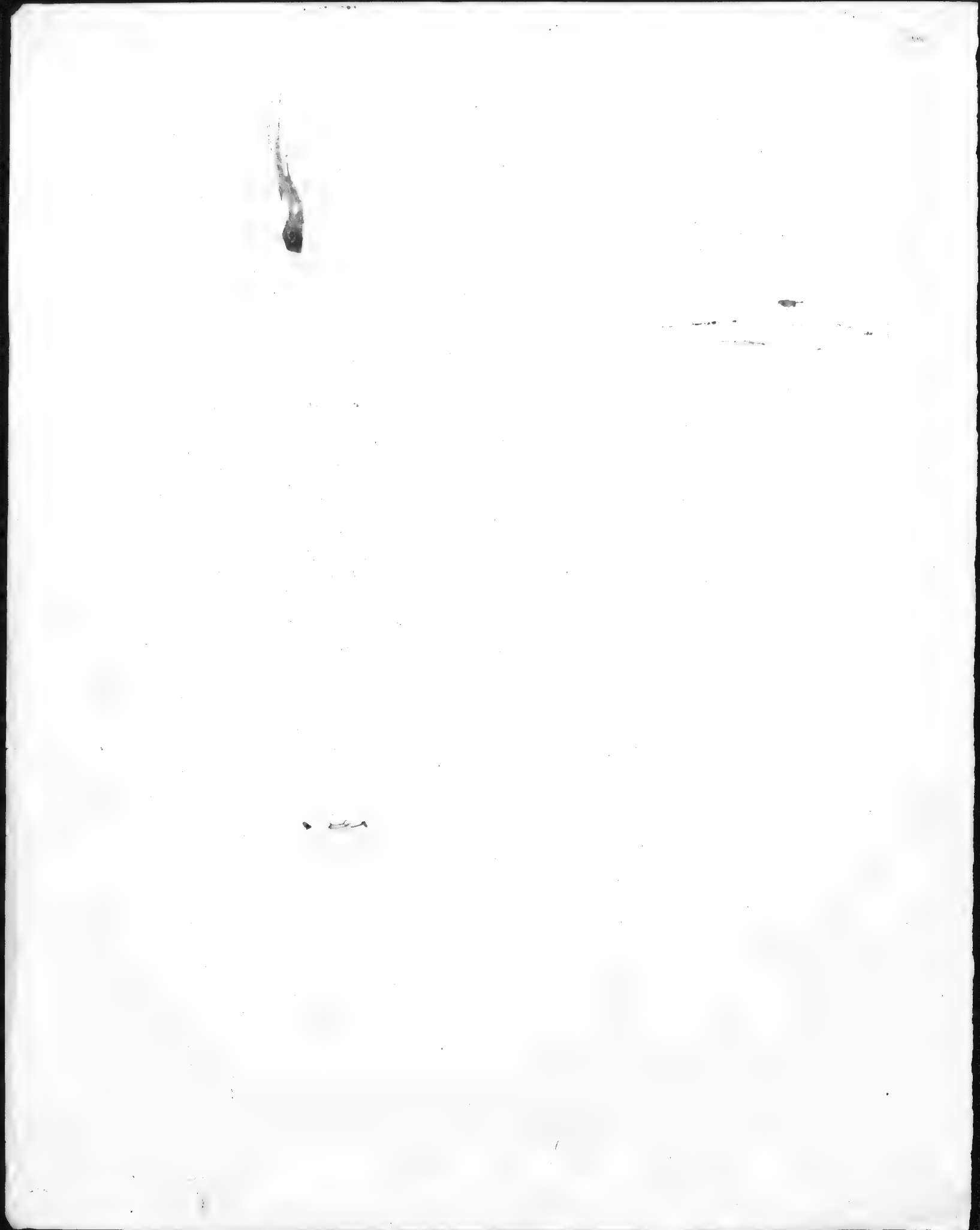
Naccinium cereum, Forst. Prodr. Fl. Ins. Austr. p. 28, &
descr. in Guill. Zeph. Tait, p. 48; ~~near~~ Smith, in Res.
Cycl., non Cham. Schlecht. & Hook. 2c.

Andromeda cerea, Linn. f. Suppl. p. 238.

Metagonia cerea, Nutt. in Trans. Amer. Phil. Soc. n. ser. 8, p. 264.

Hab. Tahiti, Society Islands; on mountain ridges, from
1000 to 4500 feet above the level of the sea.

Shrub "2 to 5 feet high", glabrous, or the angular branchlets
and young parts minutely pubescent. Leaves crowded on
the branchlets, very short-petioled, an inch, or occasionally
an inch and a half in length, rounded, oval, or ellip-
tical, rarely verging to obovate, coriaceous in texture but
not very thick. reticulated-veiny, abruptly tipped with a
rigid mucronate point, finely callose-serrate, glabrous;
the upper floral ones occasionally reduced to bracts.
Peduncles ^{and solitary} axillary, 3 to 6 lines long, often appearing race-
mose at the summit of the branchlets, where the crowded
leaves are reduced as it were to bracts of 5 or 6 lines in
length, bibracteate below the middle; the bractlets lin-
ear or subulate, 1 or 2 lines long, rather persistent. (Corolla
^{white, short} ~~long~~ 3 or 4 lines long,
ovate-~~obovate~~ ^{obovate}, five-angled, becoming cylindrical, with
an ^{cylindrical} urceolate-contracted orifice, the 5 short lobes recurved.
Limb of the calyx deeply five-cleft, ^{longer than the ovary} the lobes triangular and
very acute, ^{equal or nearly so, a line or more long,} persistent, much shorter than the berry.
the anthers, ^{in this mucronate at the base, the} nearly glabrous. ^{filaments 10,} ~~scarcely~~ ^{the}
~~long as the cells,~~ ^{and not much} a little exceeding the dorsal awns,
which are about half a line in length. Ovary five-



celled. Berry five-celled, with no trace of dorsal false partitions, globose, black; the cells many-seeded, seeds angled by mutual pressure, impressed-punctate.

This appears to be specifically distinct from the common species of the Sandwich Islands, which Chamisso and Schlechtendal, and afterwards Sir Wm Hooker, have referred to N. cereum. The Vaccinium of the Society Islands, besides its more urceolate corollas, has shorter and bi-bracteolate peduncles, very acute calyx lobes, the anthers mucronulate at the base, and their tubular horns not much surpassing the dorsal arms, - all characters which are foreign to N. reticulatum.

Mitthall's genus Metagonia is equivalent to Klotsch's sections Macropelma (of the Society and Sandwich Islands), Distigma, Neurodesia, and a part of Vitis-Idaea, including a variety of species, which, however distributed into groups, cannot properly be removed from Vaccinium. The dorsal arms of the anthers in the section Macropelma are not always erect; in N. cereum they are sometimes (perhaps abnormally) reflexed.

4

3. Vaccinium reticulatum Smith.

V. foliis confertis cor plerumque
 coriaceis ^{reticulatis} obrotatis subrotundis oblan-
 gisve callosis mucronatis glabris vel
 glabratis; pedunculis axillaribus
 strictulatis max recurvis; calycis
 lobis <sup>magnis sublan-
 gatis</sup> oblongis ^{seu} ovatis obtusis
 corolla primum ovato-cilica deum
 cylindracea 3-4-pto brevioribus; an-
 theis basi muticis, tubulis quam
 loculi longioribus aristas dorsales
 multum superantibus.

Var. a: foliis rigide coriaceis obo-
 vatis ^{ovalibus} vel rotundatis saepe glaucis
~~et~~ glaucescentibus raro nitidulis
 angute serrulatis glabris vel nudis
^{pedunculis} ramulisque pubescentibus; pedunculis
 saepissime folio brevioribus. — audit
 1. ^{glaberrima glauca} foliis rotundatis crassis integerr-
 mis, rariusve serrulatis apice vix

5
mucronulatis vel muticis basi
saepe retusis cordatisve; 2. pe-
dunculatis folio longioribus pen-
dulis.

Vaccinium reticulatum, Smith
in Rees. Cycl. no. 30; Don Syst.
3. p. 857.

V. cereum, Cham. & Schlecht. in
Linnaea, 1. p. 527; Hook. 2c. Pl.

^{t. 87. non Forst}
V. Maackianum, Klotzsch, in Linnaea, 24. p. 59.

Var. β . Calycinum: ~~foliis~~ ^{foliis} elatius,
laxum, sylvicolum; foliis te-
nuioribus, novellis membranaceis,
adultis chartaceis vel subcoria-
ceis apice serrulatis; aristis
antherarum saepius brevissimis
~~quoadmodum~~ vel fere obsoletis.

Vaccinium Calycinum, Smith,
l.c. no. 7; Don, l.c. etc.

V. Heyerianum, Klotzsch in
Linnaea, 24. p. 59. (V. cereum,

6.
Malp. Rel. Meyen. p. 360.)
Metagonia calycina, Nutt. in
Trans. Amer. Phil. Soc. n. ser.
8, p. 264.

Var. γ. dentatum; foliis argutissi-
me serrulatis <sup>(setaceo-
vil)</sup> serratis obovatis
oblongisve plus minus coriaceis;
corolla brevior ~~magis~~ subcam-
panulata calycis lobos 2-3-fo-
tantum superante.

Vaccinium dentatum, Smith, l. c.,
no. 31.

V. cereum L. Hook. & G., Pl. l. c.; Dunal
in Ob. Prov. 7, p. 575.

Var. δ. lanceolatum; foliis
latiuscule lanceolatis, c. c. et.
fere γ.

1

12

12 12 12 12

7

Tab. Sandrich Island; chiefly on the mountains; ~~the~~ chiefly at high elevations and around the craters, but also in exposed places at a lower level; the var. β . in the forest-region. Var. γ ? on the Tabular Summit of Karai; foliage only, so that it may prove to be a distinct species or a variety of the following species.

The Ohelo of the Hawaiians is an extremely polymorphous plant, varying from "a shrub of medium size", ^{or} "sometimes even twenty feet high" with a trunk three inches in diameter in the forest region, often "epidendric on the branches of trees in the deep forest of Mouna Kea", to a prostrate or spreading shrub, a few feet or ~~even~~ only a few inches in height at the elevation of 9000 to 11,500 feet; the flowers greenish and reddish; the berry

globular, or rarely ovoid-urceolate,
 about 4 lines in diameter, purple,
 red, yellowish, or glaucous-blue,
 "astringent" or "agreeably subacid"
 5-celled, many-seeded, crowned with
 the conspicuous persistent calyx.
 I detect no stable characters for
 separating any of the various forms
 as species; and there are forms which,
 referred to var. γ , by their authors,
 throw doubt upon the distinctness
 of the next species. Of Smith's
 three species the name N. reticulata
Turn is adopted in preference to N.
calycinum, ^{founded on a} ~~which belongs to a~~
 thin-leaved forest-grown form, which
 future botanists may perhaps find
 reason to distinguish, although I
 cannot.

9
4. Vaccinium penduliflorum, ^{Gard.}

V. glabrum; ~~lucida~~ ^(oblongis) foliis lucidis
coriaceis utrinque ~~eximie~~ retic-
ulato-venosis acutissime serratis;
pedunculis axillaribus ebracteatis
nux ~~mutantibus~~ vel ~~secundis~~
pendulis folio longioribus;
calycis lobis ^{sem. triangulari-} ovato-lanceolatis
acutiusculis corolla cylindra-
ceo-campanulata paullo vel
dimidio brevioribus; antheris
basi calcarato-cuspidatis, tubulis
quam loculi aequilongis aristas
dorsales, 2-3-pto superantibus.

Vaccinium penduliflorum, Gard.

Bot. Voy. Freye, p. 454, t. 68;

Druel in Bl. Prodr. 7, p. 575.

Metagonia penduliflora, Nutt. l.c.

Var. herberifolium: foliis obovatis
seu obovato-oblongis eximie retic-
ulatis ^{magis} ~~pectatis~~ denticulatis

Spinuloso-setaceis (pulcher rime
pectinatis; pedunculis folia haud vel vix
excedentibus.

Sandwich Island,

(Tab.) Var. β . E. Macii, on
North flank of Moma Haleakala,
at the elevation of 6700 feet. "Also
on the mountains of Oahu behind
Honolulu", where Gandichand
collected his N. penduliflorum.

Apparently a low and spreading
shrub. Remarkable as is ~~this place~~
our plant for its Barberry-like,
pectinately spinulose-toothed and very
reticulated leaves, yet a form of N.
reticulatum var. dentatum from
Moma Kea ~~too~~ nearly imitates it
in these respects and even in the
shortness of the corolla. I place
more reliance, therefore, upon the
spur-like cusp, or strong mucro
of the base of the anther; and this,
although not mentioned by Gandi-

found in his brief character of N.
panduli florum, is plainly repre-
 sented in figure 4 of his plate, The
~~little~~ serratures of the leaves ~~in this~~
 of the latter ~~plant~~ are not elongated as in our
 plant.

2. Gaylussacia, N. B. K.

1. Gaylussacia imbricata, Pohl.

Gaylussacia imbricata, Pohl. Pl. Brasil. 2. p. 40, t. 146;
Dunal, in Sb. Prodr. 7. p. 556.

Hab. Rio Janeiro, Brazil. (Cult. in the Botanic
Garden.)

Subord. II. Ericineae.

3. Pernettya, Gaud.

1. Pernettya mucronata, Gaud.

Pernettya mucronata, Gaud. in Ann. Sci. Nat. 5, p. 102;
Sb. Prodr. 7, p. 587; Humb. & Jacquinot, Voy. Bot.
Voy. Pole. Sud, t. 22; Hook. f. Fl. Antarctic. p. 327.
Abutus mucronata, Linn. f. Suppl. p. 239; Forst.
in Comm. Goett. 9, p. 31; Lam. Ill. t. 366; Graham,
in Bot. Mag. t. 3093; Lindl. Bot. ref. t. 1675;
Lodd. Bot. Cab. t. 1848.

Hab. Grange Harbour, Fuzgia: very abundant.

A shrub of sometimes 3 or 4 feet in height; the berries
large, purple, and edible.

2. Perrettia pumila, Hook.

Perrettia pumila, Hook. Ic. Pl. t. 9; Seb. l. c.; Humb.
& Jacquinot, l. c. t. 22; Hook. f. l. c.

Arbutus pumila, Linn. f. l. c.; Forst. l. c.

Var. β . empetrifolia, Hook. f. l. c.

Perrettia empetrifolia, Gaud. in Ann. Sci. Nat. l. c. &
Bot. Freyc. Voy. p. 454, t. 67; Seb. l. c.

~~Arbutus empetrifolia, Linn. f.~~

Andromeda empetrifolia, Lam. Dict. 1, p. 154; Willd.
Spec. Pl. 2, p. 609.

Hab. Grange Harbour, Fuegia; common on the
mountains.

4. Gaultheria, Kalm.

1. Gaultheria microphylla, Hook. f.

Gaultheria microphylla, Hook. f. Jnl. Botare. p. 327, t. 116.

Arbutus microphylla, Forst. in Bonn. Goett. 9. p. 32; Willd.
l. c.

A. perpyllifolia, Lam. Dict. 1, p. 228.

Perrettia perpyllifolia, Seb. Prodr. 7, p. 587.

Hab. Grange Harbour, Fuegia: not uncommon.

2. Gaultheria antipoda, Forst.

Gaultheria antipoda, Forst. Prodr. p. 34; A. Nich.
Fl. N. Zed. p. 210, t. 28; Lib. Prodr. 7, p. 594; Hook. f.
Fl. N. Zed. 2, p. 161.

G. antipoda & G. fluvialis, A. Bunn. Bot. N. Zed. ex
Hook. f.

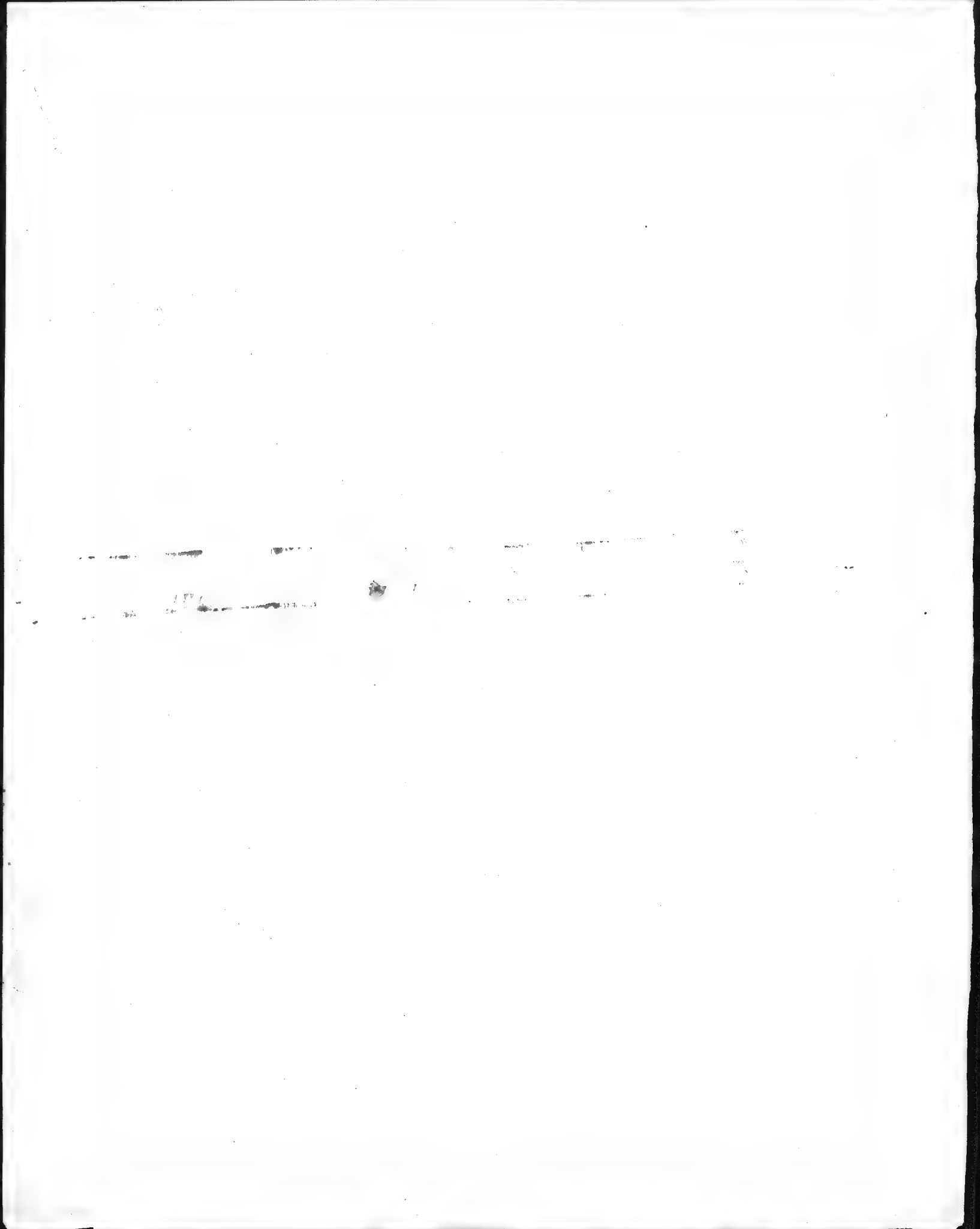
Hab. New Zealand, at the Bay of Islands. (With a haccate and with a dry calyx on the same specimens.)

3. Gaultheria (Diplycosia) Luzonica. sp. nov.

G. foliis ovalibus utrinque acuminatis supra glabris subtus
~~ramulisque~~ ramisque novellis parce strigoso-hispi-
dis; pedunculis fasciculatis petiolo longioribus; bracte-
is connatis orbiculatis.

Hab. In the Majajai Mountains, Luzon. (In fruit.)

This appears to differ specifically from either of the three described Laronese species. Diplycosia
~~Diplycosia~~ latifolia, Blume, or
Amphicalyx latifolius, Blume, as described by Hasskarl,
Pl. Jav. Rar. p. 469, is said to have very glabrous leaves;
pedicels only ^{French} 2 lines long, ~~and~~ equalling the petiole, and a
^{calyculus of} ovate acute bractlets. In our plant, the oval leaves (2
to 2½ inches long) are cuspidately acuminate and also tapering
at the base, rigid, ^{coarsely} very, glabrous above, sparsely strigose-brist-
ly underneath, as are the young branchlets. They ^{hispid} fructiferous



peduncles, in fascicles of 4 or 5, are half an inch long, and much exceed the petiole: they bear at their apex a pair of ~~connate~~ small, connate obicular and obtuse bractlets. ~~Flowers~~ Corolla and stamens not seen. In fruit the 5-cleft calyx is baccate and invests the pericarp, which indeed appears to have been itself somewhat fleshy in texture; it dehisces, however, ~~into~~ pretty regularly into 5 valves, which are ~~pretty~~ rather fragile and thin when dry: the dissepiments are thin and evanescent, leaving a central columella with ~~the~~ thick 5-lobed placenta. Seeds water-angled; the thin and shining testa conformed to the nucleus. — The presence or absence of awns to the anthers appears to be ^{no more important} in the Andromeda than in Vaccinium. ^{The awns are wanting in one of the} ~~The North American Gaultheria Myrsinites, Hook. Kois. not only awnless~~ ~~anthers, but~~ species of Gaultheria.

5. Clethra, Lin.

1. Clethra arborea, Kit.

Clethra arborea, Kit. Hort. Kew. 2, p. 73; Sims. Bot. Mag. t.
1057; Vent. Hort. Malm. t. 40; DC. Prodr. 7, p. 589.

Hab. Madeira,

2. Clethra Brasiliensis, Cham. Schlecht.

Clethra Brasiliensis, Cham. Schlecht. in Linnaea, 8, p. 540;
DC. l. c.

Hab. Brazil; in the Organ Mountains.

b. Erica, Lin.

1. Erica scoparia, Lin.

Stat. Madeira.

2. Erica arborea, Lin.

Stat. Madeira.

3. Erica cinerea, Lin. β . Maderensis, Benth.

Erica cinerea, β . Maderensis, Benth. in Stb. Prodr. 7, p. 666.

Stat. Madeira; on the summit of Pico Ruivo.

4. Erica Plukenetii, Lin.

Stat. Cape of Good Hope, in the neighborhood of Cape Town.

5. Erica mammosa, Lin.

Stat. Cape of Good Hope; with the preceding species.

6. Erica coccinea, Burf.

Hab. Cape of Good Hope, in the neighborhood of Cape Town.

7. Erica cerinthoides, Lin.

Hab. Cape of Good Hope.

8. Erica tenuifolia, Lin.?

Hab. Cape of Good Hope. (Destitute of flowers.)

9. Erica corifolia, Lin.

Hab. Cape of Good Hope, near Cape Town.

10. Erica teretiuscula, Vandl.

Hab. Cape of Good Hope; with the preceding.

11. Erica planifolia, Lin.

Hab. Cape of Good Hope.

12. Erica persoluta, Lin.

Stat. Cape of Good Hope.

13. Erica pallida, Salisb.

Stat. Cape of Good Hope.

7. Simoechilus, Klotzsch, Benth.

1. Simoechilus depressus, Benth.

Stat. Cape of Good Hope, in the neighborhood of Cape Town.

8. Salaxis, Salisb.

1. Salaxis Sieberi, Benth.

Salaxis Sieberi, Benth. in Lab. Prodr. 7, p. 711.

Stat. Cape of Good Hope.

9. Empetrum, Linn.

1. Empetrum rubrum, Vahl.

Hab. Orange Harbour, Is. Trinidad,
"every where in great profusion", taking
the place of E. nigrum of the nor-
thern hemisphere.

The genus may best be considered,
in accordance with Jussieu's views,
as an apetalous ^{form of} Ericaceae.

Ord. Epacridaceae.

1. Styphelia, R. Br.

1. Styphelia longifolia, R. Br.
2. Styphelia angustifolia, DC.
3. Styphelia lata, R. Br.
4. Styphelia triflora, Andr.
5. Styphelia viridis, Andr.

Stat. New South Wales, in the vicinity of Sydney.

2. Astroloma, R. Br.

1. Astroloma humifusum, R. Br.

Stat. Near Sydney, New South Wales.

3. Melichrus, R. Br.

1. Melichrus rotatus, R. Br.
2. Melichrus urceolatus, R. Br.

Stat. Hunter's River, New South
Wales; the latter without flowers or
fruit.

4. Gyathodes, Labill., R. Br.

1. Gyathodes acerosa, R. Br.

Stat. New Zealand, at the Bay of
Islands (In fruit.)

~~2. Gyathodes~~



2. Cyathodes Pomar. sp. nov.

C. fruticosa, erecta; foliis subpatulis oblongo-linearibus mucronatis margine integerrimis (^{novellis} ~~junioribus~~) prope apicem ciliatis) subtus glaucis multinerviis, nervis extimis subramosis; sepalis bracteisque ^{rotundatis} ~~orbiculatis~~ subciliatis; corollae tubo calycem bis superante, lobis imbricatis; stylo subulato ovario 5-7-loculari triplo longiore.

Hab. On the mountains of Tahiti, Society Islands.

A shrub, apparently 2 or 3 feet high and upright, very leafy; the younger branchlets minutely minute-puberulent. Leaves rather spreading, ^{rigid}, scarcely petioled, 4 to 6 lines long, one to 2 lines wide, abruptly cuspidate-pointed, smooth, green and shining above, glaucous-white underneath and many-nerved underneath, the (7-13) ^{exterior} nerves more or less forked or branched (~~at least the exterior ones~~) towards the apex; the acute callous margin entire, and smooth, except near the apex, when it is minutely ~~serrulate~~ ^{when young} ciliate. Flowers solitary in the axils of the upper leaves; the very short peduncle imbricated with bractlets which resemble the sepals, except that they are somewhat smaller. Sepals 5, round-ovate, thick, obscurely nerved, minutely and inconspicuously ciliate. Corolla with a cylindrical tube ($2\frac{1}{2}$ lines long) of about twice the length of the calyx; the 5 subulate-triangular lobes beardless and glabrous, spreading, about half the length of the tube. Filaments short, inserted below the sinuses of the corolla: anthers linear-oblong, fixed near their summit and pendulous. Pollen manifestly ~~compounded~~ ^{four-lobed}.

Disk sessile in the calyx, cyathiform, five-toothed. Ovary 5-7-celled; the ovules solitary in each cell, tapering into a thick and subulate style of thrice its length: stigma terminal, obtuse. Drupe globose, 3 lines in diameter, dark red; the pericarpium 5-7-celled, or by suppression of fewer cells. Seed.

Embryo

Dr N. Pickering's notes this plant is either omitted or not distinguished from the specimens gathered on Eimeo, and ^{apparently} ~~perhaps~~ also on Tahiti, which ~~I cannot~~ Dr. not differ, so far as I can see from some forms of the variable Hawaiian *C. Fumeiarnice*. The present plant has larger flowers as well as leaves, the tube of the corolla exerted beyond the calyx, and a longer style. Mr. Brown long ago mentioned that (Bot. Fl. N. Holl. p. 539) that there is a Tahitian species of the genus; but the plant seems to have been unnoticed ~~since~~ from the time of Cook's voyages to our own expedition. ~~I suspect~~ ^{Probably} ~~that Mr. Brown~~ the plant referred to by Mr. Brown belongs to the following species, which is apparently not rare near the coast, rather than to the present, which ^{seems to inhabit} ~~probably belongs~~ to the higher mountains. It is remarkable that no *Cyathodes* was collected either by Butcher or Moerenhout, or at least none is mentioned by Guillemain in his *Zephyritis Taitensis*. The ^{congenitally Hawaiian} ~~Land~~ ~~Island~~ species having been named in honor of a celebrated king of that island, the present species may ~~also~~ bear the scarcely less notable name of ~~Pomare~~ ^{Tahiti} Queen Pomare.



3. *Cyathodes Tameiameia*, Cham.

C. fruticosa; foliis patulis oblongis cuneato-obovatis linearibus ^{sepius abrupte} mucronatis ~~et~~ ^{marginibus} ~~marginibus~~ ^{marginibus} ad apicem ciliolatis subtus glaucis multinerviis, nervis saepius ramosis, ^{floribus parvis} sepalis bracteolisque orbiculatis ciliolatis; corollae tubo calycem haud excedens ^{lobis aut barbatis aut imberbibus;} ~~lobis~~ stylo crasso ovario 5-8-loculari ~~vis longiore~~ aequilongo.

Var. α . *Chamissoi*: corollae lobis intus plus minus barbatis.

Cyathodes Tameiameia, Cham! in *Linnaea*, 1, p. 539; ⁽¹⁸²⁶⁾ Hook. & Arn. Bot. Beech. Voy. p. 89; DC. Prodr. 7, p. 741.

Var. β . *Banksii* ~~Banksii~~: corollae lobis imberbibus.

Cyathodes Banksii, Gand. Bot. Freyc. Voy. ⁽¹⁸²⁶⁾ p. 98? sine descr.

C. Macraeana & *C. Banksii*, DC. Prodr. 7, p. 742.

Societatis;

Var. γ . ~~*Taitensis*~~: corollae lobis intus parcissime barbatis; foliis plerisque linearibus.

Hab. Sandwich Islands; ^{in dry and exposed places} α . On the mountains of Oahu, where it has also been gathered by Nelson, Menzies, Chamisso, ^{Gandichase,} Gay & Billie, Macrae, Barclay, ^{Henry,} &c. β . Mountains of Oahu, ~~Hawaii~~ ^{Hawaii} Maui, and Kauai, and especially of

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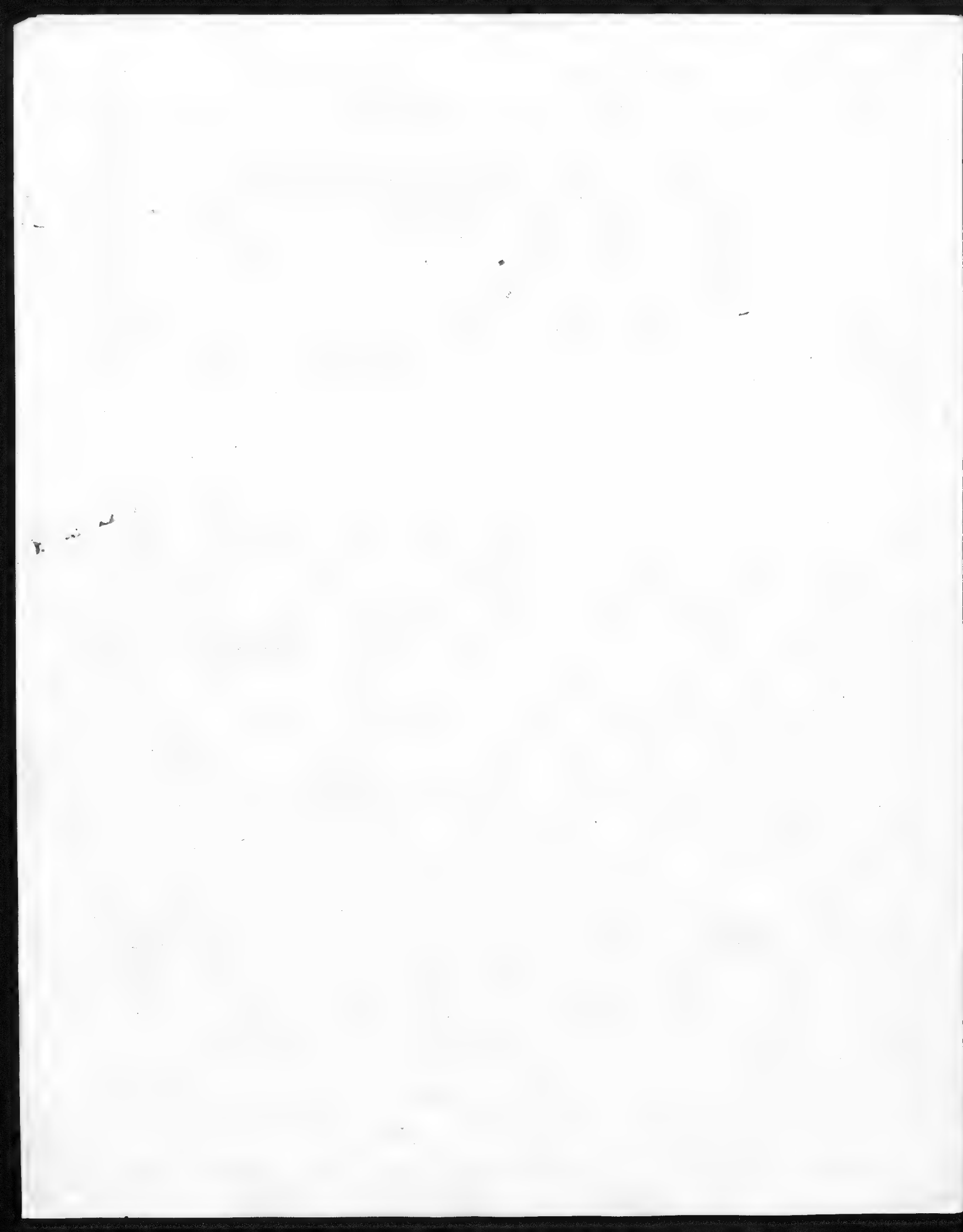
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Hawaii; also gathered by Nelson[?], Menzies, Macrae,
Es. Es. J. Vimes and ^{probably} Tahiti, Society Islands.

- or in the forest sometimes attaining 15 feet in height

A ^{ascending} ~~shrub~~, ^{Dr. Pickering} of a foot or two in height, very leafy,
much branched; the younger branchlets hirsute-puber-
ulent. Leaves spreading, or on the older branches often
reflexed, on the younger shoots sometimes ascending,
varying from linear or oblong to cuneate-obovate,
thick and coriaceous, persistent, ^{somewhat} ~~short~~ petiolate, 3 to 5 or
even 6 lines long, from one to 2 1/2 lines wide, mostly
obtuse and abruptly mucronate or mucronulate,
sometimes with a more conspicuous cusp; the thin and
more or less callous margin ciliate towards the apex,
at least when young, otherwise entire and glabrous;
the upper surface green and nearly nerveless; the lower
glaucous and usually very white, ~~marked with~~
striate with numerous nerves, which, except the central
ones, fork or branch more or less above, especially
in the broader and the obovate leaves. Flowers solitary
in the axils of the leaves, small, ^{scarcely} ~~not~~ half the size of
those of the preceding species, on short pedicels imbricated
with bractlets. Sepals, like the bractlets, orbicular,
very obtuse, minutely ciliate, about a line in length.
Corolla ~~white~~? apparently white, about a line ~~and~~ or
a line and a half long; the tube included in the calyx,
about the length of the spreading triangular and acute
lobes: these, in var. a (the original *C. Tameiameia*),
are bearded inside with either a dense or sparse, short,
hirsute pubescence, which in some specimens from Oahu
is almost obsolete, while in all the Hawaiian species



(Var. β ; the *C. Macraeana*, Lb.)

mens / the beard is wanting. ~~Rarely~~ Rarely the corolla exhibits 6 lobes: the aestivation, as in the tribe valvate. Stamens inserted just below the sinuses of the corolla: filaments about the length of the linear-oblong anthers, which are fixed near their summit. ^{Pollen from lobes} Disk cyathiform, 5-lobed. Ovary 5-8-celled, pointed with a thick and tapering or conical style of about its own length: stigma obtuse. Ovules solitary. Drupe globose, 2 to 3 lines in diameter, red or purple; the putamen thick and bony, seeds oval, 5-8-celled; some of the cells often abortive. Seed oval, with a very thin testa.

^{2 longistudinis albae... rostrata a... brownish... white...}
The specimens of var. γ , from the Society Islands, from Hawaiian states of this species; although the leaves are mostly narrower and more linear: each lobe of the corolla usually bears from 2 to 4 or 5 minute bristles in place of beard. Probably this, rather than the foregoing species, is the Tahitian plant mentioned by Mr. Adrien (Prodr. Fl. N. Holl. p. 539); and to our var. β is likely to belong both the Sandwich Island species to which he alludes. The foliage is so polymorphous that different forms would at first sight unhesitatingly be ~~referred to~~ ~~referred to~~ viewed as belonging to different species; but I have no doubt that they are here justly combined, and that the beard of the corolla in this case furnishes no reliable character.

3. *Cyathodes Tamiame*

4. Cyathodes Douglasii, sp. nov.

C. fruticosa; foliis ^(seu lanceolatis) suberectis oblongis ^(seu lanceolatis) acuminato-cuspidatis margine plerumque hispidulo-ciliatis subtus pallidioribus glaucisve 5-9-nerviis, nervis saepius simplicissimis; sepalis bracteisque ovatis obtusis ciliatis; corolla tubo calycem aequante, lobis intus barbatis; stylo subulato ovario sexloculari ~~duplo~~ bis terve longiore.

Var. β . struthioloides: foliis erectis lanceolatis seu ovato-oblongis; sepalis acutis!

Hab. (Sandwich Islands, Douglas.) On Mouna Loa and Mouna Kea, Hawaii, and on the mountains of the eastern part of Maui. β . Mouna Kea, in the region of Sophora; and in the mountains of Kauai (the latter without flowers or fruit).

A low shrub, apparently either upright or diffuse, resembling some forms of the preceding species: but the leaves (3 to 5 lines long, and a line or a line and a half long) are more erect, or sometimes appressed, and imbricated, oblong, varying to ovate or lanceolate, but not to obovate, ~~trifid~~ ~~not~~ acuminate into a conspicuous pungent cusp, or almost awned; the acute margin scabrous-ciliolate or minutely hispid-ciliate throughout, at least when young, or above the middle; the lower surface paler or glaucous, but not so white as in the foregoing, 5-9-nerved, usually 7-nerved; the nerves simple and straight, or the

exterior ones occasionally branched. Flowers axillary and terminal, about twice the size of those of C. Tameiameia. Bractlets and sepals ovate, obtuse, or the latter inclining to acute, finely ciliate. Corolla about 3 lines long; the cylindrical tube as long as the calyx; the lanceolate-oblong lobes bearded inside, usually densely so, as also is the throat. Stamens, disk, &c. as in the preceding. Ovary six-celled, tapering into a subulate style of twice or thrice its length. Drupe globose, or somewhat depressed, red, 3 or 4 lines in diameter, some of the cells often suppressed.

The var. β . is apparently lower and more slender, with the leaves commonly more appressed, and the sepals acute. Of the corolla only vestiges remain on the summit of the fruit; the lobes or the throat more or less bearded. It appears to pass insensibly into the ordinary forms of the species.

None of the specimens here combined accord with the C. Banksii, so imperfectly characterized by DeCandolle, and suspected to be scarcely distinct from his C. Macraena; for, although the leaves are more or less erect ^{rather} and ^{sometimes} ~~glauca~~ glaucous-white beneath, they are ~~scabrous~~ rough and ciliate or serrulate-ciliate on the margin and the pungent point is mostly very conspicuous. The nerves also are commonly simple; but this character is not constant. Still the larger flowers and longer style should distinguish ~~this~~ all forms of this from the preceding species, unless that is even more polymorphous than I have supposed it to be.

[The above sp. = C. imbricata, Stoeck.
glew in: Bonn. muse. 32, p. 10, (1859)
- (p. 9) in Dreyer's 13 Hand.

5. Lissanthe, R. Br.

1. Lissanthe subulata, R. Br.
2. Lissanthe daphnoides, R. Br.

Stat. New South Wales, in the vicinity.

6. Leucopogon, R. Br.

1. Leucopogon Richei, Db.
2. Leucopogon muticus, R. Br.
3. Leucopogon ericoides, R. Br.
4. Leucopogon virgatus, R. Br.
5. Leucopogon microphyllus, R. Br.
6. Leucopogon denudatus, Sieber.
7. Leucopogon appressus, R. Br.

Stat. New South Wales, in the vicinity of Sydney, Wodargong, &c.

7. Leucopogon appressus, R. Br. l. c.
Stat. Port Jackson, New South Wales
 ** Novo-Zelandici

8. Leucopogon Fraseri, A. Bunn.

Leucopogon Fraseri, A. Bunn, Bot. N. Zeal. in Ann. *
~~Mag.~~ Nat. Hist. 2, p. 47 (1838); Hook. f. Fl. N. Zeal. 1, p. 115,
 non Lb. Prodr. 7, p. 752 (1839).

L. mesophilus, Lb. Prodr. 7, p. 752.

L. Bellignians, Raul. Pl. N. Zel. p. 18, t. 12.

Stat. Tiptona, New Zealand.

9. Leucopogon fasciculatus, A. Rich.

Leucopogon fasciculatus, A. Rich. Fl. N. Zel. p. 215; A.
 Bunn. l. c.; Lb. Prodr. 7, p. 744; Hook. f. Fl. N. Zeal. 1, p. 114.
Epacris fasciculata, Forst. Prodr. Pl. Ins. Austr. p. 13.

Stat. Bay of Islands, New Zealand.

~~*** Polypogon ***~~

7. Leucopogon Vitiensis, sp. nov.

L. glaberrimus; caule fruticoso erecto; foliis lanceolatis
utrinque attenuatis callosis-apiculatis concoloribus leviter
nervatis margine levibus; spicis axillaribus brevissimis
paucifloris; sepalis bracteisque nudis; stylo glabro;
drupa obovata 4-5-loculari disco crasso cyathi-
formi imposita. demum clavato (285, vix Latill.
Leucopogon cymbulæ, Seem., Coll. Vitiensis, no.
Stab. Freije Islands; at Enboa, Sandalwood
Bay.

A shrub, 6 to 8 feet high, erect, glabrous throughout;
even the rachis of inflorescence scarcely pubescent. Leaves
crowded throughout the branches, ^{3 to 4 lines wide,} $1\frac{1}{2}$ to 3 inches long, char-
taceo-coriaceous, lanceolate, tapering toward both ends,
especially toward the apex, which terminates in a slender callus
point which is often sphaelate, pale green, of the same
hue both sides, but dull underneath, minutely nervose-
striate under a lens, and marked above with 5-⁷ evident
impressed nerves, which are seldom apparent underneath,
plane or nearly so, the margins smooth and entire.
Spikes axillary, very short (the squamose rachis $1\frac{1}{2}$ to 3
lines long, 3-6-flowered, sepals and the pair of bract-
lets naked and smooth, or the margin very obscurely
ciliolate, broadly ovate, ^{base, rigid,} persistent, Corolla scarcely
twice the length of the calyx; the lanceolate-oblong lobes
as long as the tube, valvate in aestivation, villous-bearded

inside. Stamens 5, included, inserted in the throat of the corolla; filaments nearly the length of the oblong anthers. ^{the base surrounded by an entire cyathiform disk:} Ovary ovoid, 5-celled; style glabrous, short. Drupe obovate, dry, 4-5-celled, or by suppression one-celled, with a single seed in each cell, the disk and receptacle becoming enlarged, fleshy and clavate, so as to raise the mature drupe beyond the persistent calyx.

One species of this genus *L. pycnostegia*, Labill. inhabits New Caledonia, three are known in New Zealand.

This is the only truly Polynesian species known, excepting *L. cymbula*, Labill. of New Caledonia. Three species are known in New Zealand, one in Borneo, another in Malacca; the rest, about 100 in number, are all Australian.

L. pycnostegia

7. Mondoca, K. Br.

1. Mondoca elliptica, K. Br.
2. Mondoca seiparia, K. Br.

Hab. New South Wales, in the vicinity of Sydney.

8. Trochocarpa, K. Br.

1. Trochocarpa laurina, K. Br.

Hab. New South, in the vicinity of Sydney.

9. Epacris, (Forst.) Car., Smith.

1. Epacris pulchella, Car.
2. Epacris microphylla, K. Br.
3. Epacris longiflora, Car.
4. Epacris oblongifolia, Smith.

Stat. New South Wales, near Sydney. Of the last named there are two forms in the collection; one with broader, ovate-oblong or ~~ovate~~ oblong-lanceolate leaves; the other with narrowly lanceolate leaves and smaller flowers; apparently quite distinct they are united through the ordinary states of the species.

5. Epacris pauciflora, A. Rich.

Stat. New Zealand, at the Bay of Islands.

10. Lysinema, R. Br.

1. Lysinema purgens, R. Br.

Stat. New South Wales, probably from the neighborhood of Sydney.

10. Spargelia, Smith.

1. Spargelia incarnata, Smith.

Stat. Hunter's River, New South
Wales; the ordinary form, and the
var. longifolia.

12. Priontes, Speng., R. Br.

1. Priontes Americana, Hook.

Priontes Americana, Hook. Ic. Pl.

t. 30; Hook. f. adn. in Fl. Antarc.

2, p. 849

Azulea hollata, Hook. in herb. Banks.

Alloclase Americana, Endl. Gen. p.

749; Walp. Repert. 2, p. 733.

Lebetanthus Americanus, Endl. Ench.

Bot. p. 368; Walp. Repert. 6, p. 432; Hook.

f. l.c. p. 327.

Lacquinidia prostrata, Humb. & Jacq. Voy.
Pole Sud. Bot. t. 22.

Stat. Orange Harbour, Zuegia;
growing on the base of the trunks of
trees on which the plant creeps,
ascending to some height.

The only American representative
of Epacridaceae; and said to imitate
true Ericaceae in its two-celled
anthers as well as hypogynous sta-
mens. Although the flowers of our
specimens are too far advanced for
deciding the question, I suppose
that the anthers are biloculate
rather than normally bilocular.

13. Dracophyllum, Labill.

1. Dracophyllum secundum, R. Br.

Stat. New South Wales, in the
vicinity of Sydney.

- 4
2. *Dracophyllum latifolium*, A. Cunn.
 3. *Dracophyllum Urvilleanum*, A. Rich.

~~*Dracophyllum Urvilleanum*, A. Rich. Fl. N. Z. p. 224;
A. Cunn. l.c.; Hook. f. l.c.~~

Hab. Bay of Islands, New Zealand.

49
Munster, Germany 83-
all under 100 lbs.
sent by express.

Mar. 21, 1917





1000

Symplocos, Jacq.

(Tab.)

1. Symplocos (Stopea) spicata, Roxb.

Var. β . subintegerrima: spicis saepe
contractis; foliis plerumque sub=
integerrimis, ~~fora~~ in parvifoliis
2-3-follicariis, in grandifoliis 6-7-
follicariis.

. Hab. Feejee Islands, at Sandalwood
Bay, &c.

This was also collected by Dr.
Seemann, ~~and~~ both with nearly entire
and with serrated leaves, so that he
without question refers it to the
Indian, South Chinese, and Archi=
pelagic S. spicata. I see no suf=
ficient differences to justify a con=
trary opinion. But our specimens
are mostly entire leaved or nearly
so, and like Seemann's incline to have

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abbreviated inflorescence. They show a great variety of forms, of which the best marked are, 1. One with coriaceous less-veined leaves only 2 or 3 inches long; 2, with larger, thin-membraceous, entire leaves, and the inflorescence rarely exceeding the petiole, probably growing in deep forest; 3, with large, oval, scarcely acuminate, subcoriaceous leaves, from 5 to 7 inches long. These three forms were figured by Mr. Rich, who probably regarded them as distinct species.

Plate . Symplocos spicata,
Roxb. var. subintegerrima, ~~7 forms A.~~
A. Form 1. B. Form 2.

Plate Form 3.

2, Symplocos (Styrea) candata, Wall.

Stat. Luzon, on the Majaijai
Mountains, Accords well with Drs.
Storker and Thomson's specimens from
Khasia and Chittagong.

4
 **
 * Ad Meliaceas Addend.

Navaa, Benth.

(paristensis)
 Char. auctus. Calyx 4-7. fidus, lobis triangulari-
 oratis aestivatione leviter imbricatis. Petala lobis
 calycis numero aequalia, hypogyna, ligulato-
 longa, utrinque sericeo-puberula, aestivatione con-
 voluto-imbricata, decidua. Stamina numero
 petalorum dupla ~~sapius~~ vel sapius tripla
~~aut~~ subtrippla, ab eis libera: filamenta plana,
 linearia, basi glabra in tubum, disco hypo-
 gyno cupuliformi tenui adnatum, monadel-
 pha, superne libera intus barbato-villosissima,
 apice acuto antheram bilocularem (loculis
 longitudinaliter dehiscentibus) introssam fere basi-
 fixam gerentia. Pollen globosum. Ovarium
 ovoidum, basi lata sessile, 3-4-loculare: Stylus
 columnaris: stigma ~~pellatum~~ ~~apice depressum~~
 3-4 radiatum. Ovula in loculis gemina,
 angulo centrali prope basim inserta, collateralia,
~~sub~~ adscendentia, subamphitropa, micropyle superi.
 Bacca globosa, 3-4-locularis. Semina in locu-
 lis abortu solitaria, rariusve bina, ^{ovalia,} ~~per~~ adscen-
 dentia, ^{exaristata;} testa lavi chartacea; hilo lineari chalazae
 magnae basilari proximo; raphe brevissima.
 Albumen nullum. Cotyledones carnosae, plano-
 convexae, suborbiculares, sinu profundo cordatae,
 radiculam gracilem superam prossus includentes.

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— *Abuscula glabella*; foliis simplicibus integerrimis alternis ~~obovato~~-longis obsolete punctatis; stipulis nullis; pedunculis axillaribus multifloris; floribus cymosis parvis forte polygamis.

Navæa, Benth. in Hook. Lond. Jour. Bot. 2, p. 212, et supra,
1. p. 244, t. 16.

1. Navæa Amicorum, Benth. (Tab.)

Two specimens from the Fuzue Islands, mostly in fruit, having been placed by Mr. Rich in *Styrax*, and figured apparently as a species of that genus, had escaped my attention until after the publication of the first volume of this work, in which this remarkable plant was described. The new materials, although scanty, afford the means, so much desired of completing the characters of *Navæa*, which, as revised ^{and extended}, are accordingly given above. As respects the flowers, the only thing to add is, that in those borne by a small cyme on an otherwise fruiting specimen branch, the stamens, mostly 10 in number, are only twice as many as the petals, and are nearly of uniform length. These specimens are otherwise so similar that I cannot suppose them to belong to a second species; but, as the anthers are smaller and contain little pollen, it is quite probable that there is at least a polygamous tendency in the flowers, and that these belong to the more fertile plant. The fruit is a globose, apparently rather dry berry, of 4 or 5 lines in diameter, stipate by

the small persistent calyx, 3-4 celled by their dissepiments, which probably are sometimes obliterated, 3-4 seeded, or by abortion even one-seeded: sometimes two seeds are fertilized in the same cell. Seeds oval, 3 lines long, smooth, destitute of any arillus, ~~ascending~~ ascending from near the base of the cell, sessile, the linear hilum attached directly to the axis of the fruit, without any funiculus: testa chartaceous, or perhaps somewhat fleshy, its base ^{occupied} ~~marked~~ by a large orbicular chalazæ, which is connected with the hilum by an extremely short raphe; the hilum extending from near the base almost to the middle of the seed. Inner integument of the seed a little fleshy? Albumen none. The embryo seen is apparently not quite full grown: it consists of a pair of broadly oval or almost orbicular, ^{or flat} plano-convex, fleshy, plane, pettate cotyledons, which have ^{and narrow} a deep sinus at the radicular extremity; the slender and rather long radicle wholly retracted within the sinus, superior, remote from the hilum.

The whole structure of the seed and embryo (corresponding with those of most Trichiliae) manifestly confirms the ^{suggested} relationship of this genus to the Meliaceae; ^{inside} and the discovery that the stamens are sometimes only double the petals in number, reduces the flower to the type of that family. The hypogynous disk equally exists as a cup surrounding the ovary, ^{most unlike that of Trichilia} ~~as in~~ Starkeghnia &c., only here it is wholly adnate to the andracium. ~~It is by no means surprising, however, that Mr. Rich., who seems not to have investigated the seed, should~~

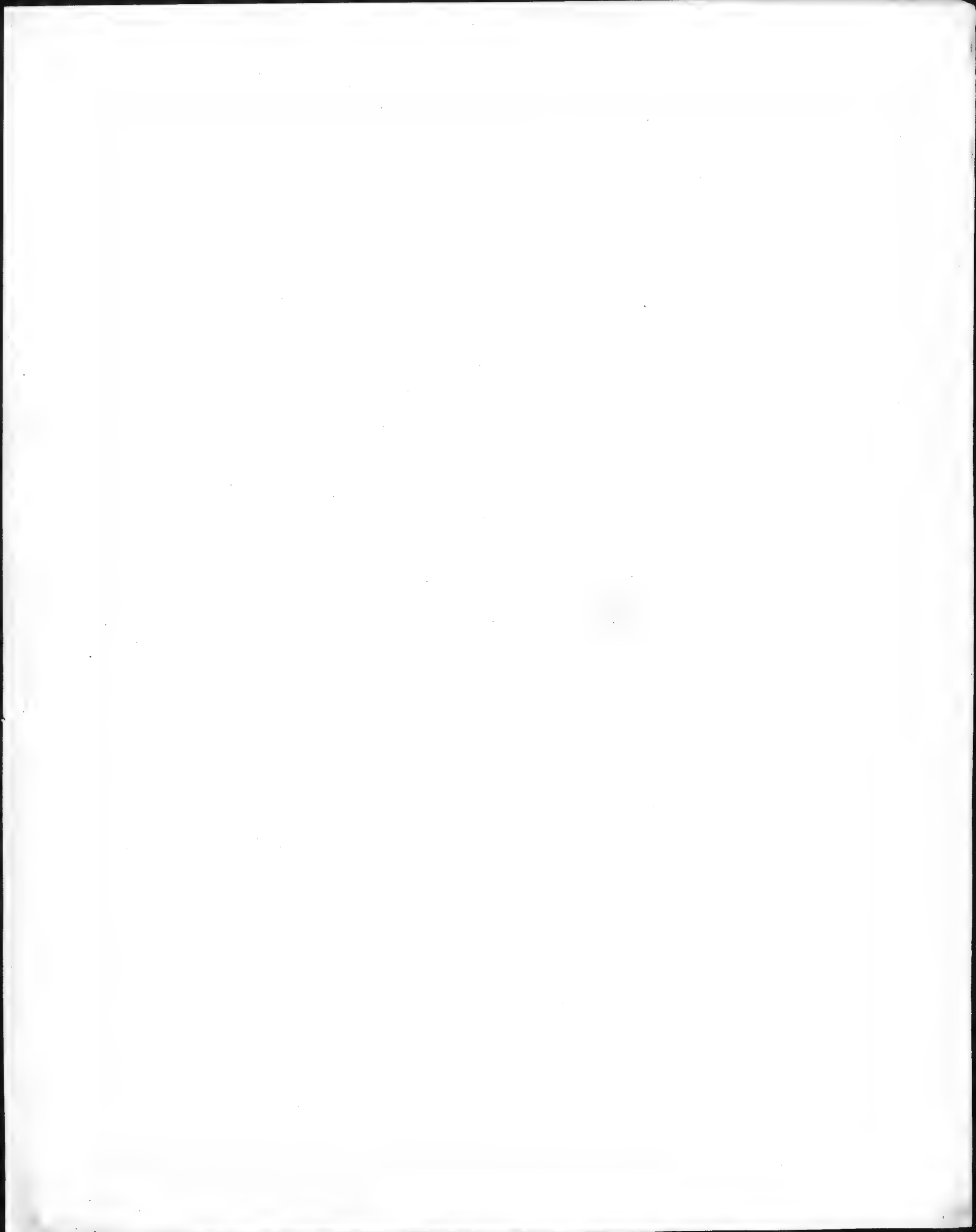
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Wide Mem. Amer. Acad. n. ser. vol. 5,
p. 229.

Plate

Navia Anicorum.

— plate —



Thomas

Ord. Sapotaceae.

1. Lucuma, Molina.

1. Lucuma Valparadisea, Molina.

Lucuma Valparadisea, Molina, Hist. Chil. p. 162 & 334; Gay,
Fl. Chil. 4, p. 376.

L. splendens, ~~Alph.~~ Stb. Prodr. 8, p. 171.

Hab. Chili; in high ravines near Valparaiso.
(In flower.)

2. Sapota, Plumier.

1. Sapota parvifolia, ~~Alph.~~ Stb.

~~Sapota parvifolia, Alph. Stb. Prodr. 8, p. 175.~~

Hab. Phillipine Islands; in the mountains of Baños,
Luzon.

The leaves are rather broader than in Burnings's
specimens, and ~~more~~ ^{rather} coriaceous; indeed they are
hardly membranaceous in Burnings's plant.

2. Sapota? pyramifera, Sp. Nov.

S.? glabra; foliis oblongo-lanceolatis utrinque sub-
acuminatis subcoriaceis pallidis tenuiter trans-
versim venosis; calyce quinquepartito; fructu pyri-
formi parvo pedicello ^{angulo} paullo longiore semine
unico obovato turgido repleto.

Hab. Oralau, Feejee Islands.

The specimens bear fruit only. The leaves, as also the branches are entirely glabrous, oblong-lanceolate, somewhat pointed at both ends, 3 to 5 inches long, barely an inch and a half wide, on petioles of 5 or 6 lines in length, pale, rather coriaceous, (entire) transversely veiny with slender and inconspicuous nearly straight veins, the veinlets minutely reticulated, at the margin confluent into a manifest false vein. Pedicels about 4 lines long, minutely ferruginous, mostly solitary in the axils. Flowers not seen. The persistent calyx barely 2 lines in diameter, five-parted; the segments orbicular, imbricated, ciliate. Fruit pyriform, half an inch long, the pericarp fleshy but thin in the dried specimens, one-celled, and filled with the single turgid-obovate seed. This is erect, 5 or 5½ lines long, the sides somewhat flattened; the testa very thick, bony, smooth and shining; the base acutish; the oblong-linear and somewhat oblique hilum occupying nearly the whole ventral face of the seed. Embryo in the axis of fleshy albumen; cotyledons broad and thin; radicle inferior.

3. Sapota? Vitiensis, Sp. Nov.

S.? glabra; foliis oblongis seu obovato-oblongis
obtusis vel retusis base in petiolum longiusculum
attenuatis subcoriaceis reticulatis; fructu
sessili globoso 3-4 spermo.

Stat. Ovalau, Feejee Islands; along the coast.

This is said to be a "shrub, about 12 feet high," with a large, green, sessile fruit. The flowers are unknown; even the calyx has ~~disappeared~~ fallen from the base of the fruit. The leaves resemble those of the preceding species, but are larger (4 to 6 inches long and $1\frac{1}{2}$ to $2\frac{1}{2}$ inches wide), either oblong or obovate-oblong, obtuse or rounded and retuse at the apex, the base ~~contracted~~ ^{contracted} ~~fusiform~~ into a petiole of an inch or more in length, the somewhat shining surfaces more reticulate-veined. The fruit is spherical, baccate, about an inch in diameter, and three-four-seeded. Seeds oblong, somewhat compressed; the smooth and shining long testa ~~marked~~ with a linear sulcate hilum occupying nearly its whole length. Those examined are empty. The plant is referred to Sapota from its resemblance to the preceding and the following species.

On Vanna-levu, another of the Feejee Islands was gathered a specimen, apparently of another Sapotaceous plant; with oval and obtuse, coriaceous, obscurely transversely veined leaves, ~~and~~ stout fructiferous peduncles as long as the petiole (an inch or more in length), and vestiges of an oblong, apparently 2-seeded fruit. The genus is not determinable from these materials.

4. Sapota Sandwicensis, Sp. Nov.

ℳ. foliis elliptico-oblongis obtusis
basi acutis tenuiter transversim
venosis et reticulatis mox glabris
novellis ramulisque ^{tenui} ~~pube~~ ^{prufa} ~~ferre~~
~~gine~~ seu albida tenuissima to-
mentulosis, petiolo gracili pe-
dicellis longiore; floribus penta-
meris; corolla glabra calycem
vix superante, ^{lobis ovatis acutiusculis;} ~~appendicibus seu~~
staminibus sterilibus spatha-
lato-lanceolatis cum 5 fertilibus
subinclusis; ovario 5-loculari.
— Var. a. foliis obtusissimis
3-6-pollicaribus, petiolo saepe
sesquipollicari.

Var. B. foliis $1\frac{1}{2}$ - 3-pollicaribus
saepe acutiusculis.

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Hub. Sandrich Island, a, Oahu,
on the Kaala Mountains, where it
was also collected by Kemy, in fruit,
as are our specimens. Var. β . La-
nai and Hawaii (the latter mostly
with acute or acutish leaves), in
flower and with young fruit, Kemy.

A tree said by our collectors to
be 30 or 40 feet high; the nascent
shoots and foliage ^{sericeous-}~~finely~~ tomentu-
lose, ~~with~~ the close and fine down
either reddish ferrugineous or whitish,
usually the former; this wholly
deciduous from the older leaves,
which are glabrous, and the up-
per surface shining, the texture
coriaceous, but thin in the large-leaved
form, the venation in the manner
of S. costata but with the primary
veins ~~more~~ less strong. Peduncles
solitary or fascicled in the axils, 4
to 6 lines, or in fruit an inch in

length. Calyx 5-parted; the divisions
ovate-oblong, rather obtuse,
minutely pubescent. Corolla
campanulate, glabrous, 5-cleft;
entire. Anthers ovate-sagittate, mu-
cronate. Ovary surrounded by
long villous hairs, and above
clothed with a finer pubescence,
5-celled, with a single ascen-
ding ovule in each cell; style
short and thick. Fruit a glo-
bose berry, resembling a small
apple, an inch or more in di-
ameter, ripening two or more
thick seeds, the ~~scar~~ broad scar
occupying almost the whole ~~length~~
length of the ventral edge; testa
very thick and hard. Embryo in the
axis of the fleshy albumen, which
is almost divided by the broad and
foliaceous albumen; radicle inferior.

It is possible, but not ^{at all} probable,
that the smaller-leaved spec-
imens, which have supplied the
floral characters, ~~are~~ may be of
a different species from the larger-
leaved and fructiferous ones. * ~~the~~
~~But the~~ forms mentioned in Dr. Pickering's
~~plant~~ printed notes belong pretty clearly to the
same species. *

* The plant from Kauri, mentioned
in Dr. Pickering's notes (Distribution
of Plants, p. 403) in connection with
the preceding, proves to be a Hyllos-
ma, which was likewise collected
on Harwaie by Kemy. ~~H. Sandwi-~~
~~ensis~~, Gray in Proceed. Amer. Acad.
S. Sci. Most probably it is a mere
variety ^{the} of ^(H. Lepidii, blous) H. macrocarpa of Tahiti,
connecting with H. orbiculatum.

8

Sessalisia, R. Br.

1. Sessalisia glabra, sp. nov.

S. foliis obovato-oblongis basi attenuatis coriaceis glabris, venis reticulatis; pedicellis in axillis fasciculatis petiolo duplo longioribus; corolla calyce subsericeo paullo longiore campanulata quinquefida glabra, lobis rotundatis filamenta sterilia subulata multo superantibus stylo gracili ~~aequaliter~~ aequilongis.

Stat. New South Wales, near Moolongong.

There is a specimen of the same species in the Hookerian herbarium gathered by ^{Mr.} Backhouse; and a related one from Fraser, which is perhaps the Sessalisia laurifolia of A. Richard, ~~and the unpublished~~ as well as one from Cunningham, named Mimusops myrsinoides, which may be the same thing. In the present plant, the leaves are obovate-oblong or elongated-oblong, from 2 to 4 inches long, either somewhat pointed or obtuse, sometimes emarginate, tapering at the base into a short petiole of 2 or 3 lines in length, rather thin, but coriaceous, reticulate-veiny, somewhat shining, glabrous, as are the branchlets. Pedicels 2-5 in axillary fascicles, 3 to 5 lines long, minutely hairy. Sepals ⁵, orbicular, strongly imbricated, two of them exterior, minutely silky-pubescent, $2\frac{1}{2}$ lines long, a ~~corolla campanulata~~ little shorter than the campanulate glabrous corolla; the broad and rounded lobes of which are scarcely half the length of the tube, two of them exterior in aestivation, the innermost smaller than the others. Sterile filaments ^{subulate} 5, alternate with the lobes of

the corolla, much shorter than they, inserted just below the
sinuses. Fertile Stamens, ⁵, opposite the lobes of the corolla
and inserted lower; filaments subulate, rather shorter
than the subsagittate mucronate anthers. Ovary
villous, five-celled; much shorter than the columnar and
thunder style which is glabrous and as long as the
corolla. Stigma truncate, obscurely five-lobed. Fruit
not seen.

10

Isomandra, Wight.

1. Isomandra? Rickii, Sp. Nov.

? undique glabra; foliis chartaceis obovatis apice
rotundatis nunc retusis basi acutis; pedicellis
calyce quadrifido plusduplo longioribus; filamen-
tis sinuatis barbatis.

Hab. Tongatabu.

The ~~imperfect~~ specimen is named, "Bassia
retusa, n. sp." by Mr. Rich in the collection. ~~There~~
Only a single and imperfect corolla is extant, ~~with~~ by
which to determine the genus. As that appears to be
four-cleft, like the calyx, and with ^a fertile stamen
in the sinuses ~~as~~ ^{as} well ^{as} before each lobe, and there
are no appendages, I refer the plant to Isomandra,
notwithstanding the bearded filaments. The rather
thin leaves are about 3 inches long and $1\frac{1}{2}$ to 2 wide,
transversely veiny, on petioles of 6 or 8 lines long.
Flowers fascicled, apparently not crowded; the pedi-
cels (4 or 5 lines long) and the ~~calyx~~ calyx glabrous. The
latter is four-cleft to the middle; ~~and~~ two of the
lobes are wholly exterior and a little larger
than the inner ones. Corolla probably little
longer than the calyx. Style after flowering half
an inch long.

9
11
Bumelia, Swartz.

1. Bumelia excelsa, Aubl. Ab.

~~Bumelia excelsa, Aubl. Ab. Prod. 8, p. 192.~~

Hab. Brazil; on the coast near Rio Janeiro.

6. Bassia, Koenig, Linn.

1. Bassia Amicorum, Sp. Nov.

B. foliis obovatis nunc ovalibus retusis glabris
viridibus; pedicellis elongatis; corolla glabra sep-
partita calyce hexamero plus-duplo longiore; ham-
initus 18; filamentis subulato-filiformibus antheris
lineari-sagittatis cuspidatis subaequilongis.

Hab. Tongatabu, Friendly Islands; on the
shore.

sterile The materials consist of loose flowers and leafy
branches; the former probably picked up under the tree.
Leaves glabrous, as are the stout branchlets, 3 to 6 inches
long, and with petioles an inch ^{2 or 3 inches wide} long, subcoriaceous, obovate
or nearly oval, with an acutish base, and a rounded, mostly
retuse apex, veny, loosely reticulated, light green, rather

12

dull, entire. Pedicels 2 inches long, slender, silky-
pubescent, as is the calyx. Sepals 6, in two series,
round-ovate, scarcely half the length of the six-parted,
glabrous corolla; the segments of the latter lanceolate,
half an inch long, destitute of appendages. Stamens
18, all fertile and of about the same length, but
those answering to the sinuses of the corolla inserted
rather lower down: filaments ^{glabrous} subulate-filiform; anthers
linear-sagittate, cuspidate-pointed, slightly hairy, about
3 lines long. Style filiform, an inch long. Ovary
silky-pubescent. Fruit unknown.

Mr. Rich supposed this to be Forster's Bassia
obovata, from Tanna. But, on a hasty comparison
of specimens I find that Forster's plant has the
leaves less ^{ven}veiny, more tapering at the base, and some-
what pointed (instead of rounded and retuse) at the
apex; the pedicels shorter; the flowers much smaller;
and the corolla, probably, more than six-cleft, is pu-
bescent ~~rather~~ externally.

13

†

7. Mimusops, Linn.

1. Mimusops Glengi, Linn.

Stat. Mangsi Islands, in the Sooloo Sea.

2. Mimusops dissecta, R. Br.

Mimusops dissecta, R. Br. Prodr. Fl. N. Holl. p. 531, in
obs.; ~~Afl.~~ Ab. Prodr. 8, p. 204.

Achras dissecta, Forst. Pl. Exc. p. 43, excl. syn., & Prodr.
p. 25.

Stat. Tongatabu.

The specimens, mostly with forming fruit,
furnish no addition to our knowledge of this species;
nor do I find that any notes were made on the
living plant; which is undoubtedly the same as
Forster's.

Mimusops subsericea, Mart.

14

Regent.

Mimusops subsericea, Mart. in Flora, ~~Reich~~ 1839, &
Herb. Fl. Bras. no. 487; Alph. D.C. l. c. p. 206.
Synsarrhena subsericea, Fisch. & Meyer, Bull. Acad.
Petr. 1841.

Hab. Rio Janeiro, Brazil. (With young fruit.)

1
Ord. Ebenacea.

1. Diospyros, Lin.

1. Diospyros maritima, Blume.

2. Diospyros Sapota, Roxb.?

Hab. Small island in the Andoo
Sea. North in fruit only.

2

3. *Diospyros Samoensis*. Sp. Nov.

D. ramis ^{novellis} ~~junioribus~~ vix puberulis; foliis glabris ovato-oblongis obtuse acuminatis basi acutis; pedunculis masculis 3-9. floris, femineis solitariis unifloris petiolum subaequantibus; calyce quadri-
fido sericeo-puberulo, lobis obtusissimis, femineis rotundatis intus basi ~~ex~~ quasi coronatis corolla
extus sericea quadri-fida aequilongis; staminibus ⁸⁻⁹ 9;
ovario hirsuto octoloculari; fructu globoso.

Nat. Tutuila and Savaii, Samoan or Navigators' Islands: "in woods and also sometimes planted"

'A middle-sized tree'; the branches puberulent when quite young, soon glabrous. Leaves ovate-oblong or oblong, alternate, 3 to 6 inches in length, $1\frac{1}{2}$ to 3 inches wide, chartaceous in texture, ~~rather veiny, glabrous~~ ^{rather} loosely veined, conspicuously but obtusely acuminate, acute at the base; the petiole nearly half an inch long. Male flowers either in threes at the extremity of a peduncle of the length of the petiole, or in two or three fascicles of three on short partial peduncles, borne on a common peduncle of an inch in length. Pedicels short. Calyx four-cleft nearly to the middle, 2 to 3 lines long, ~~sericeous~~ silky-puberulent; the lobes very obtuse. Corolla silky-pubescent out side, about twice the length of the calyx, four-cleft; the lobes contorted in aestivation, "yellow." Stamens 8 or 9; anthers slender, cuspidate; filaments glabrous. Female flowers solitary on short peduncles of nearly the length of

3
the petiole, considerably larger than the male flowers; the lobes of the calyx roundish, somewhat auriculate at the base, as long as the tube, which is produced into a short and rounded process or corona before each lobe. Corolla nearly as in the male flowers, but apparently not longer than the calyx. Stamens 8, as in the male flowers, but smaller. Ovary hirsute, eight-celled, with a solitary ovule suspended from the summit of each cell. Styles very short, 4 or 5, slightly two-lobed. Fruit globose, an inch in diameter, short-peduncled. Seeds 4 or more, perhaps 8, smooth, half an inch long, convex and slightly one-grooved on the back, the sides flattened, the inner edge acute. Embryo ~~with~~ more than half the length of the ~~albumen~~ hard albumen: the radicle longer than the flat cotyledons.

In aspect this species a good deal resembles *P. Philippensis*, Alph. DC.; but it is quite distinct in its characters. I have only a single female flower to examine.

2, Maba, Forst.

1, Maba elliptica, Forst.

Maba elliptica, Forst. Char. Gen.

p. 121, t. 61; Linn. f. Suppl. p. 426;
Labill. Ser. Austr. Cal. p. 32, t. 35;
A. DC. Prodr. 8, p. 420.

M. major, Forst. Prodr. p. 92.

Stat. Friendly, or Tonga, Samoan
or Navigators, and Feejee Island.

Dr. Pickering recorded but one Maba
at Tongatabu, and that ^{probably} the same
as ~~the~~ one from the Samoan Island.
I conclude therefore that ^{Forster's} M. major
is probably ~~the same~~ one of the forms
of M. elliptica, with a larger fruit.
This species varies with ~~broadly~~ ^{the}
leaves broadly elliptical or oval, nar-
rowly elliptical or oblong, to lanceolate-
oblong and acute or even acuminate.

The latter, gathered by Brackenridge
on Tutuila, is noted as perhaps
a second species; but the male plant
which alone was collected, does not
otherwise differ. Our plant from
the Feejee Islands is (so far as
can be ~~determined~~^{determined} from a specimen
in fruit only) differs only in the entire
want of pubescence even of the nas-
cent leaves. Dr. Seemann's no. 295
is the same, with slight traces of
the caducous pubescence, and I
suppose his no. 296. is a broad-leaved
form of the same species; which may
also include his no. 297. But Dr.
Pickering's notes indicate other species
in the Feejee Islands.

6

2. Maba foliosa, Rich in herb.

M. foliis confertis lato-ellipticis
utrinque rotundatis basi cordatis
brevisime petiolatis glabris, ~~la~~
novellis cum ramulis fructibus-
que olivaceo-ferrugineo-to-
mentulosis; pedunculis fructiferis
brevis uni-trifloris; calyce tri-
lobo.

Itab. Muthuata and Ovolau,
Feejee Islands, in deep woods, at the
altitude of 2000 feet.

"A shrub, 10 to 15 feet high"; the
branches densely leafy, ferruginous
tomentose when young. Leaves an
inch or little more in length, 9 or
10 lines broad, rounded or even retuse
at the summit, cordate at the base,
the sinus as deep as the very short
petiole, so that they appear as if

7

semile: they are chartaceo-coriaceous
in texture, flat, obscurely veined
above, reticulated beneath. Flowers
not seen. Fruit 9 lines long, olive-
shaped, 1-2-seeded ferruginous-to-
mentulose, solitary or 2 or 3 together
on very short pedicels raised on a
short peduncle of 2 or 3 lines in
length. Seed and embryo as in the
genus.

3. Maba Sandriensis, A. DC.

M. foliis lato-lanceolatis oblongis
sen ovalibus coriaceis pallidis ven-
uloso-reticulatis glabris, novellis
cum ramulis floribusque extus
sericeo-pilosis; floribus in axillis
subsessilibus, masculis 15-17-andris
calyce ^{alte trifido,} ~~trifido~~ femineis — ;
fructu ovali calyce breviter tubo
stipato, — rudet foliis aut nunc

utrinque acutiusculis vel obtusi-
usculis, nunc basi rotundatis, nunc
utrinque rotundatis basi retusis.

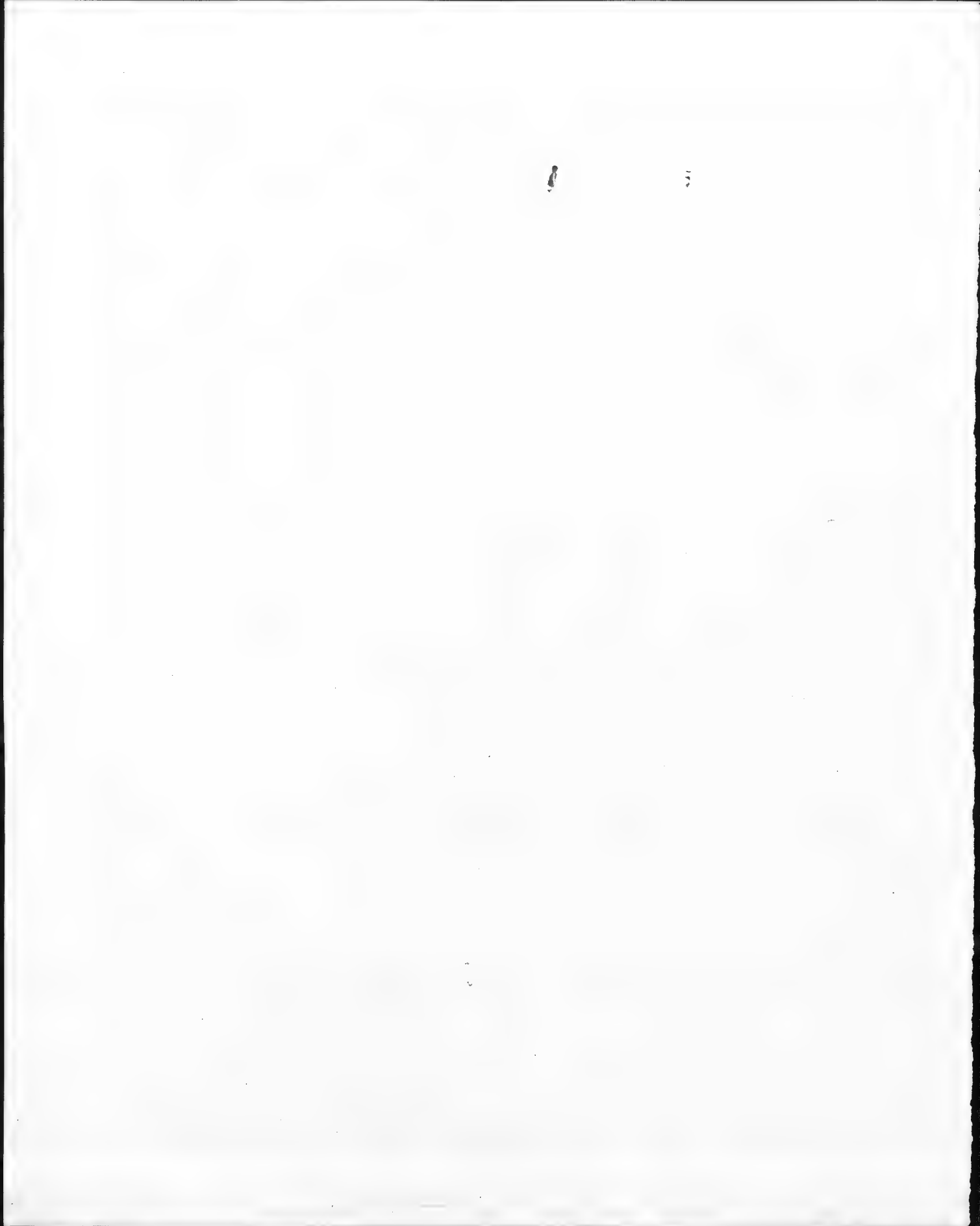
Maba Sandwicensis, A. DC.

Prodr. 8, p. 242.

Sclerosperma dimorphum, Nutt. in
Herb. Hook.

Stat. Sandwich Island; on
the mountains behind Honolulu,
Oahu, Lay and Collie, Sandichand,
^{Seemann} Nuttall, ^(no. 470) Remy, H. Hawaii, Remy, {
a variety with remarkably roundish-oval
or ovate-rotund leaves retuse at the
base.

Our specimens have fruit only;
~~on a large-leaved form.~~ and I have
examined male flower-buds from speci-
mens collected by Seemann and Remy
(470); the female flowers are still a
desideratum. The leaves vary exceed-



ingly in shape, and in size from
1 1/4 to 4 inches in length. Flowers
(male) either single or 3 to 5 in a nearly sessile
axillary cluster, silky, pubescent; the
divisions of the ^{deeply 3-lobed} ~~3-parted~~ calyx broad-
ly ovate, obtuse, imbricated more
or less in aestivation. Corolla in
the bud not exceeding the calyx, ovoid,
three-parted, the divisions imbricated
in aestivation, or in some flowers
I believe convolute. Stamens 15
to 17, hypogynous, short, surmount-
ing the villous rudiment of an
ovary; anthers oval, flatish, im-
marginate at both ends, almost in-
nate. The fruit accords with De-
Candolle's description; it is silky-pubes-
cent becoming glabrate, the thin pericarp
filled by a single oblong and terete seed,
Embryo not half the length of the hard
albumen; cotyledons oval, much shorter
than the slender superior radicle.

Embryo not half the length of the hard albumen :
cotyledons oval, ~~not~~ much shorter than the slender
superior radicle. The ~~ovary is the~~ fertile flower
~~is still a desideratum.~~

Maba Cumingiana. Alph. DC. l. c.

Stat. On a small island in the Sooloo Sea.

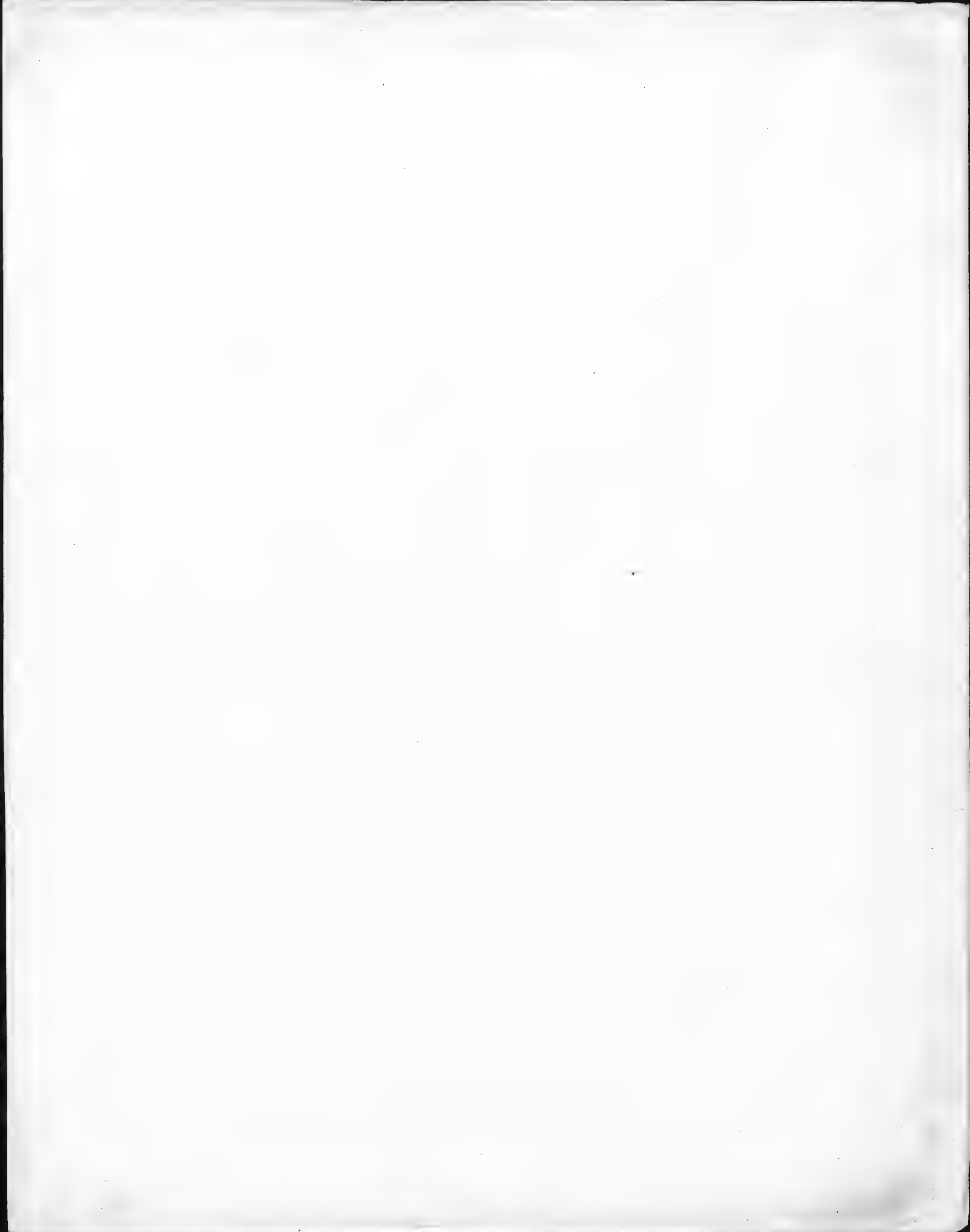
The specimens, in fruit only, have rather larger
leaves. Cuming's plant is described as having.
The fructiferous peduncles are much shorter than the
three-lobed calyx. Fruit globular, about 5 lines
in diameter, three-seeded. Seed oblong, triangular,
with the back rounded. Cotyledons much shorter than the
slender radicle. It is perhaps M. ovata, R. Br., and
too near M. luxifolia.

3. Cargillia, R. Br.

1. Cargillia australis, R. Br.

Cargillia australis, R. Br. Prodr. Fl. N. Holl. p. 526;
Hook. Bot. Mag. t. 3274; Alph. DC. l. c.

Stat. Sydney, New South Wales.



1

(Ord. Loganiaceae)

1. Spigelia, Lin.

Schlecht.

1. Spigelia Beyrichiana, Cham. ~~Sp.~~

Hab. Brazil, near Rio Janeiro.

~~A single and very~~ Imperfect specimens.

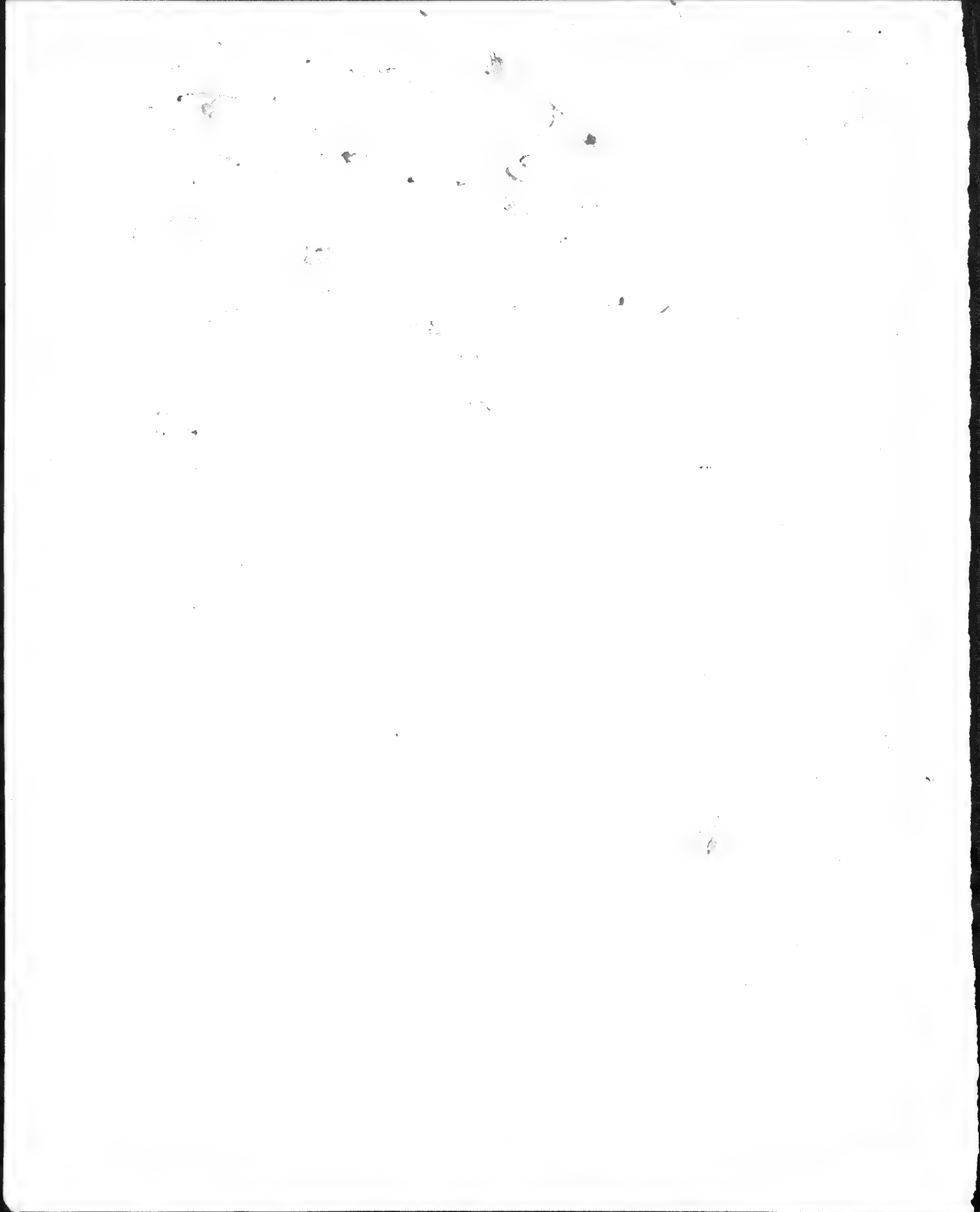
2. Mitrasacme, Labill.

1. Mitrasacme capillaris, Wall.

2. Mitrasacme alsinoides, R. Br.

3. Mitrasacme polymorpha, R. Br.

Hab. The first was gathered in Luzon, near Manila; the second at Hunter's River, and the third at Sydney, New South Wales.



3. Buddleia, Linn.

Of this ^{specimens of} genus, four well-known species were picked up, viz. Buddleia Americana, ^{Linn.} at Lima; B. globosa, Lam., at Santiago, Chili; B. Brasiliensis at Rio Janeiro; and B. Madagascariensis, Lam., at St. Helena.

4. Geniostoma, Forst.

Blume is the only author who (long ago, under the name of Haemospermum, Reinw., and more recently, in Mus. Bot. Lugd.-Bat.) has correctly described the internal structure of the fruit in this genus.

I have not seen the Mauritian species; but all the Polynesian ^{specimens} ~~ones~~ examined have their seeds immersed in the pulpy placenta. The pulp dries up after dehiscence, so that

the seeds come to view although still covered with a pellicle which confines them in a mass; but when soaked in water, the pulp swells again and conceals them.* The fresh fruit when deliquescent must have much the appearance of that of *Belastnes scandens*, where the seeds are concealed in the pulpy arillus. Had Mr. Bentham noticed this he would ~~not~~ have remarked the

* From the supplementary remarks added by Mr. Bentham to his revision of the *Loganiaceae* in the first volume of the *Journal of the Proceedings of the Linnean Society*, I learn that M. Bureau has noticed and illustrated this structure in his inaugural ~~thesis~~ dissertation upon this group of plants. I have not seen this dissertation. I do not find any "regular stellately-lobed expansions of the placenta" or ~~separate~~ arilliform portions surrounding ~~the~~ separately enclosing each seed (as is the case in *Podophyllum*), but rather a general pulpy development of the placenta, filling the cells of the fruit.

analogy with Gardenia and the
Randia, with which, more-
 over, ~~they~~ it accords in activa-
 tion. Not absolutely, however; the
 difference between convolute and
 imbricate activation is no more
 constant in this genus than in
 many others. An occasional flower
 of G. rupestris has one lobe of the
 corolla wholly external, as in Lo-
 sania, while in all of the very few
 flower-buds preserved of G. astylum,
 the activation is regularly quin-
 cuncial. The scales in the genus
 are ~~rather~~ amphitropous, as sus-
 pected by Endlicher, ^{rather} than anatropous,
 as described by Blume. ~~That~~
~~G. ligustrifolium are strictly an-~~
~~atropous.~~ The embryo is not
 minute, as in Blume's character,
 nor that as figured in his G.
 lasiocarpum, but cylindrical and
 almost equalling the albumen,
 as described by Alphonse De Can-
 dolle, except that the cotyledons
 are shorter.

1. Geniostoma ligustrifolium, A. Bunn. (Tab.

G. stipulis utrinque triangulatis
acutis; stigmatibus didymis vel
bica^{style breviori}pitatis; pinctis ovato-globosis.

Geniostoma ligustrifolium, A. Bunn.
 in Ann. & Mag. Nat. Hist. 2. p. 47;
 Hook. & C. Pl. t. 430; Hook. f. Fl.
 N. Zee. 1. p. 177; A. St. Poir. 9. p. 27;
 Benth. Logan. in Ann. Linn. Soc. 1.
 p. 97.

G. rupestris, A. Rich. Bot. Voy. Astral.
 p. 207, non Forst.

Hab. Bay of Islands, New Zealand
 in fruit.

and the mucication of the anther. The latter is striking in a cultivated specimen, from which the figures 15 and 16 were taken.

This species is pretty well distinguished from *G. rupestris* by its didymous stigma, or pair of capitate stigmata, and its more or less triangular and pointed (instead of directly truncate) stipules. The ~~lobes~~ ^{divisions} of the calyx are narrower, and usually more pointed, but this is a variable character, as also is the villosity of the corolla. The petals are more slender; the blade of the leaves from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches long.

Plate.

Goniostoma ligustrinum.

Fig. 13, Unexpanded flower, from a cultivated specimen. 14, Longitudinal section of an expanded flower. 15, 16, Stamens. 17, More magnified vertical section of the pistil, with the calyx, &c. 18, Fruit, of the natural size. 19, Placenta with the imbedded seeds, after soaking. 20, Transverse section of the same. 21, A detached seed. 22, Vertical section of the same. 23, The embryo. - Variously magnified, except fig. 18.

2, Geniostoma rupestre, Forst. (Tab.)

G. stipulis recte truncatis; stylo
nunc brevi nunc elongato;
stigmati globoso denique obvato
~~integro~~ ~~subglobo~~o; fructu ovali. St. var.
a. glabra; foliis $1\frac{1}{2}$ - $3\frac{1}{2}$ - p. llic. oblongo-sec-
ogato; lanceolatis; stylo stigmati ~~integro~~ $2\frac{1}{2}$ - $3\frac{1}{2}$ p. llic.
Geniostoma rupestre, Forst. Char.
Gen. t. 12 (pennina), & Prodr. p.
17; Spreng. Perg. Pl. 1. p. 18; DC.
l.c.; Benth. l.c.

Var. β . ellipticum; glaberrimum;
foliis elliptico-ovalibus sec-
tato-oblongis utrinque obtusis
vel obtusissimis nunc coriaceis
nunc submembranaceis; fructu
ovali-oblongo ~~vel~~ seu ovali-
subglobo.

G. foetissimum, Rich. in Herb.

G. crassifolium, Benth. in Jour.
Linn. Soc. l.c. p. 96; pro-

Aertium Var. β . glaberrimum,
excl. Pl. Sandw. Insul.

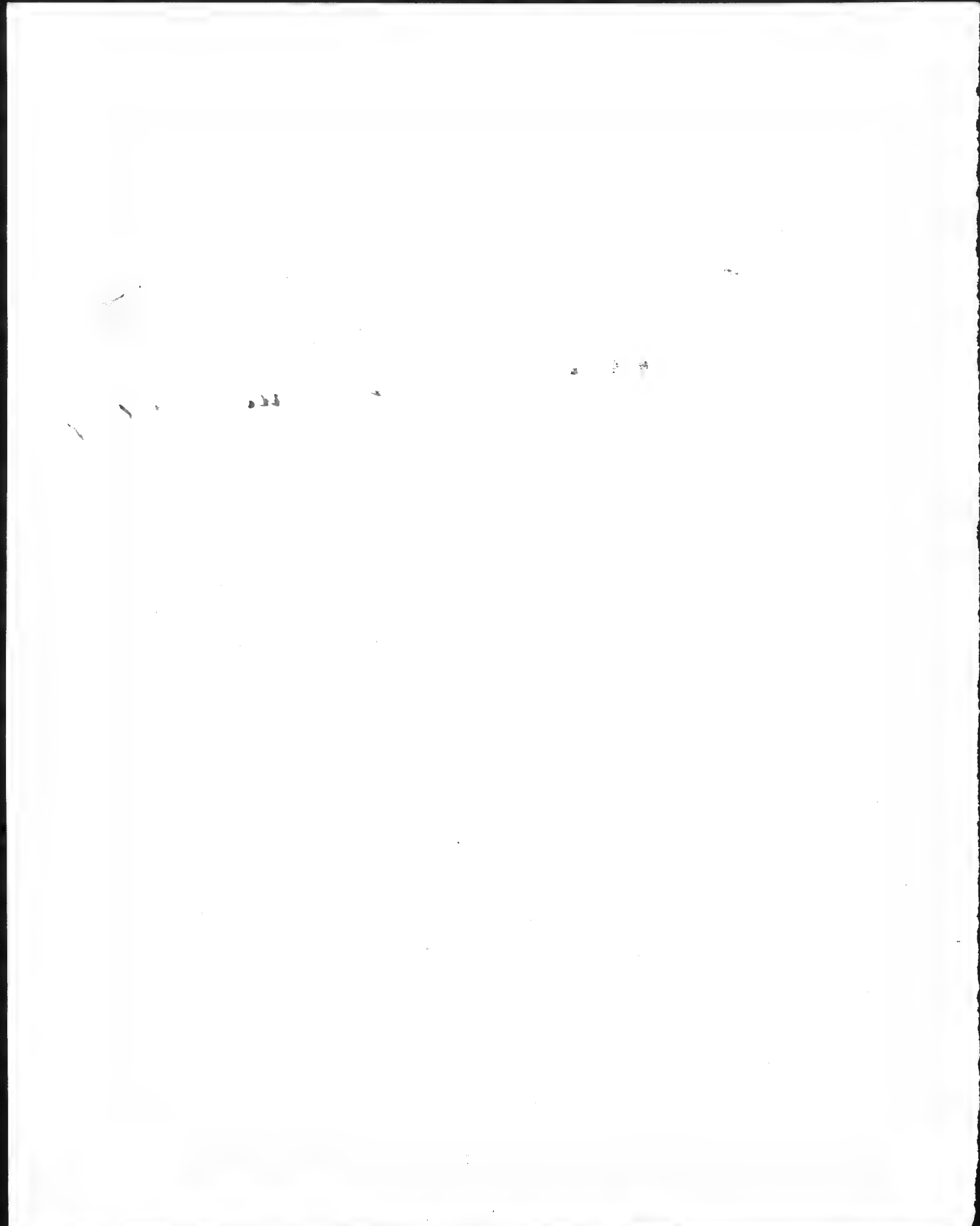
Var. *N. macrophyllum*; glaberrimum; foliis fere membranaceis 4-6-pollicaribus ovatis seu ovato-oblongis pl. m. acuminatis; calycis lobis ~~ovatis~~ latioribus brevioribus obtusis; stylo stigmate haud longiori; cat. var. B.

Geniostoma macrophyllum,
Rich., in Herb.

G. buringianum, Benth. l.c.?

Var. *S. puberulum*; ramulis junioribus costaque foliorum (interdum vasis paginae inferioris) rufo-sen fuliginoso-puberulis; foliis saepissime oblongo-lanceolatis acutis vel acuminatis basi obtusis vel rotundatis 3-6-pollicaribus; stylo nunc brevi nunc brevissimis; fructu ovoido.

Stemoxpermum arborescens, Reinw.



* ex Blume, Bijdr. p. 1018.

Geniostoma stamospermum, ~~Blume~~
~~Mus. Bot.~~ ~~in~~ Steud.; DC.
l.c.; Blume, Mus. Bot. Lugd.
Bot. 1, p. 238; Miq. Fl. Ind. Bat. 2, p. 353.

G. crassifolium, Benth. l.c.
forma crassifolia?
(G. reticulata, Blume, Mus. Bot. l.c. fide Miq.)

Stat. Feejee Islands (var. a.) Var.
P. Sandulwood Bay, Vanna-levu,
Tonga-tabu, Mountains of Futuila,
Samoa Islands. Y. Samoa Islands.
I. Vanna-levu to Feejee Islands; also
gathered at ^{Tapaitunga} ~~Maraka~~, Friendly Islands,
by Prof. Harvey.

These widely diverse forms
cannot be discriminated as species.
And must all be referred to Forster's
G. rufestria. In none of them,
however, do I find the "Mylus laxi-
villus" mentioned by Sprengel; but this
is probably taken from Forster's figure
d, where the hairs are delineated
as surrounding the ovary. In fact,

* If we may rely upon Miguel's
Flora, and if Blume's plant really has ~~the~~
a "connectivum prodictum" like that figured for
G. montanum, then these synonyms must be
excluded. But Blume does not so describe
the stamens.

they belong to the corolla. Forster's figures ~~is wretched~~ - though sufficient to identify the species - are ^{not} wretched, and in several respects ~~accord~~ ^{accord} with his own character, nor ~~to either of~~ either of them with Sprengel's description from an original specimen.

Forster's "Stylus filiformis tubo longior" answers to some states of the species; Sprengel's "Stylus brevissimus" to others, and to Forster's own figure. But Forster's "Stigma cylindricum" is totally at variance with all forms of the plant, and also with his own figure, with which which Sprengel's "Stigma capitatum, pubescens, sublanthosum" accords. The stigma is in fact globular at first even depressed-globose, but after anthesis becoming somewhat obovate or turbinate. There is nothing answering to the appearance of four parallel lobes as delineated in Forster's figure.

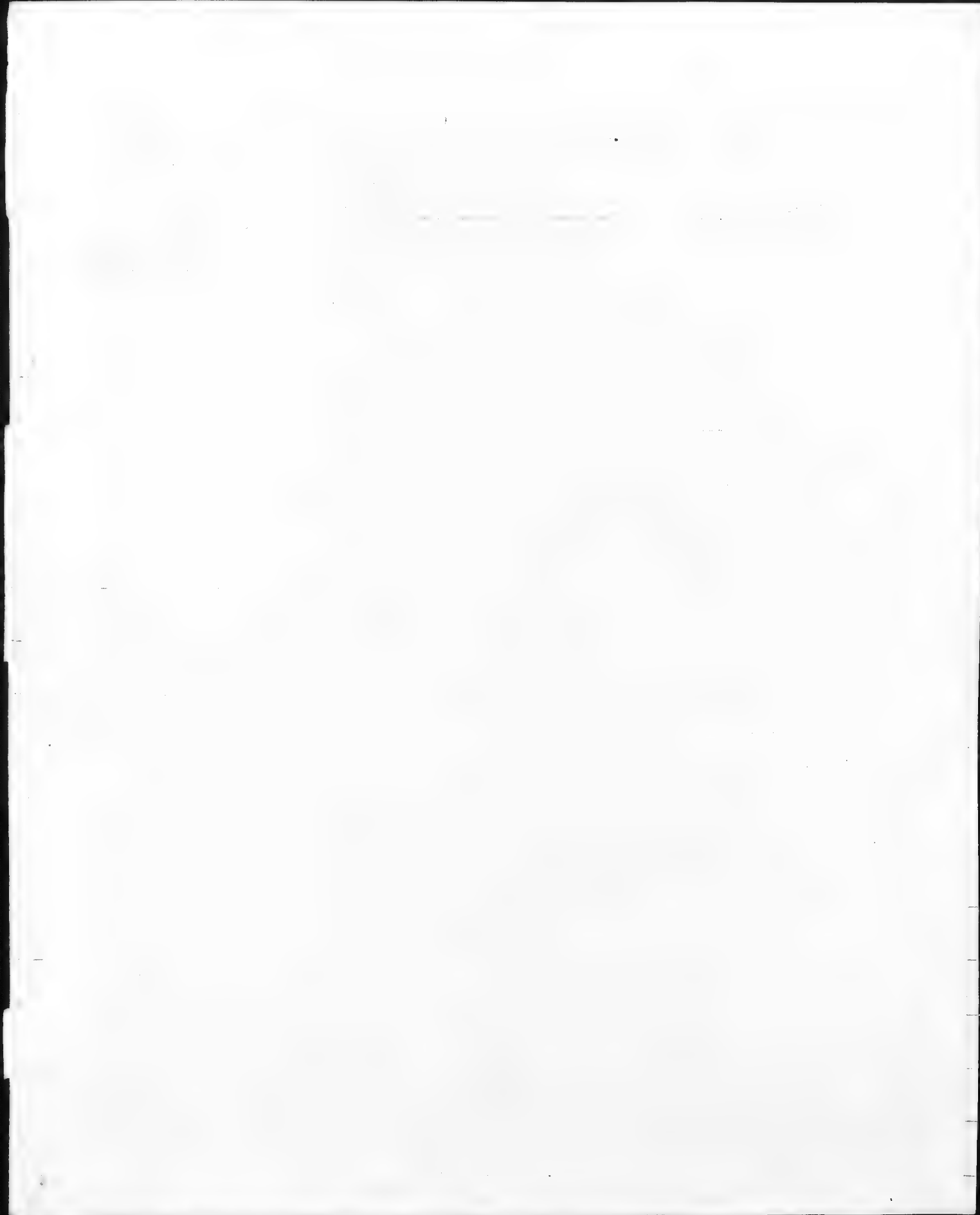
So Forster describes and delineates the tube of the corolla as much longer than it is, which has caused the genus to be

characterized as having a somewhat funnel-shaped corolla, while Sprengel calls it "pubescens pentapetaloides". It is really between campanulate and rotate. The pubescence of the upper face of the lobes is variable, and sometimes wanting. The villosity in the throat, sometimes copious, is often reduced to a tuft at the insertion of the short filaments, or even upon them, as in *B. lasiocarpum*. The lobes of the calyx vary from triangular-subulate to triangular-ovate, from very acute to obtuse or obtusish. The capsule varies from globose-ovoid to oblong; from $2\frac{1}{2}$ to 4 lines in length. Placental and seeds as in *B. ligusticum*. *Filium*: testa, when the dried pulp is rubbed off, minutely papillose. The flowers are said to be very faded, like that of *Gymnosma*, at least in some of the varieties.

Plate *Geniostoma rupestre*, var. *ellipticum*. Fig. 1, Portion of inflorescence. 2, Bud, and flower, ^{as} more magnified. 3, Flower, the corolla removed. 4, Vertical section of same. 5, Section of a flower with the corolla. 6, Corolla and stamens displayed. All the details magnified. ^{much} of var. *macrophyllum*, showing the shorter style.

abruptly acutish, quinquecincially
imbricated divisions, and the cor-
olla (which we have in bud only)
is entirely glabrous, and its lobes
are quinquecincially imbricated in
the buds examined. The Sta-
mens are likewise glabrous. The
ovary ~~ovoid~~ has a tapering sum-
mit, which is directly tipped with
globular and nearly glabrous stig-
ma. The forming fruits are 4 or 5
times long, somewhat fusiform,
2-celled, with a thin dissepiment;
the placentae are beginning their
fleshy development, and enclosing the
forming seeds; ~~but~~ showing no separate
aristiform expansions. Leaves about
4 inches long, and 2 inches wide, rather
thin; petioles 2 or 3 lines long, by mes-
surable, twice or thrice trichotomous,
loosely rather few-flowered ^{about an inch long.} Bracts
thickish, subulate. Stipules vaginately
~~but~~ apparently cleft on each side, i.e.,
intrapetiolar and slightly connate on
both sides with the fellow of the opposite leaf.

Plate Quercus aestivalis, Fig. 7. Unexpanded
flower. — 8. Diagram of the quinquecincial aestivation,
Gonthe and stamens displayed. 10, 11. Stamens. 12. 9.
Section of calyx and pistil in outline. All magnified.



5. Labordea, Gaudich.

Char. nov. Calyx quinquepar=
titus, ~~saepe majusculus~~. ~~lobis~~
persistens. Corolla subcoriacea,
(^{intus villosa} hypocraterimorpha); lobis tubo
dimidio brevioribus aestivatione
contortis. Stamina 5, fauci
corollae inserta, lobis alterna;
filamenta brevissima; antherae
lineari-oblongae, dorso supra
basim affixae, biloculares.
Ovarium ovoidem vel conic=
um, 2-3-loculare; stylus
aut brevis aut elongatus;
stigma elongato-clavatum,
pubentissimum. Ovula in
placentis crassis numerosissima,
amphitropa ^{vel subanatropha}. Fructus capsu=
laris crassivalvis, ^{et} semina in
placentis ^{loculos replentibus} pulposis, nidulantia.

monino Geniostomatis, sed gynae-
cio nunc trimeris. — Frutices
Sandwicensis; stipulis in vagin-
ulam intrapetiolarem connatis;
inflorescentia terminali cymosa
saepius umbelliformi. — Sect. 1. *Gynae-*
aperta, pedunculata; calyx
quam corolla multo brevior;
ovarium dimerum. (Inter *Laborde-*
am et *Geniostoma* medium.) —
Sect. 2. *Labordea* vera, *Gynae-*
semilis umbelliformi-contracta;
sepala foliacea, lanceolata, tu-
buncorollae ~~aequale~~ subsuperantia.

The genus *Labordia* (as written
by Gandichand and DeCandolle), or
Labordea (according to ^{was known} Parthian's
more correct orthography) until
very ~~recent~~ recently only by the character

and figure in the Botany of -
Freyer's Voyage. Judging
from the plate, Mr. Bentham ~~presumed~~
~~suspected~~ the aestivation of the corolla
to be valvular, and the fruit to be
baccate. His ^{opinion} ~~conjecture~~ as to
the aestivation would seem to have
been verified by M. Bureau. I
have not seen the inaugural
thesis of Bureau ^{but} Mr. Bentham,
in the supplement to his Notes on
Loganiaceae, remarks that "M. Bu-
reau has been enabled to dissect
three flowers of this plant [*Labi-
dea fragroidea*]. He confirms the
presumed valvular aestivation of
the corolla, but always finds
two cells only to the ovary, and
very plausibly suggests that the
three celled one examined by Sandi-
chand was accidentally abnormal."
Now the present collection com-
prises good flowering specimens of
a species which can hardly be other
than that figured by Sandichand;
and fruiting specimens of another, nearly
related species, - thus revealing the real

affinity of the genus. In the
 flowering plant, the lobes of
 the corolla ^{line the} ~~are~~ ^{and} decidedly, although
 narrowly, overlap in the convo-
 lute manner, and are slightly
 twisted (towards the observer's left).
 I can only suppose that the
 flower-buds examined by Buscari
 were too young to show the vesti-
 tation properly. In the fruiting
 plant, all the fruit is actually
 bicarpellary. Moreover, the fruit
 is capsular, and similar to that
 of Senecostoma, except in being
 trimernous. Labræa, therefore,
 is nearly related to Senecostoma;
 from which, thus far, it would seem
 to be well distinguished by its
 habit (resembling Gartniera), the
 long and foliaceous division of
 the calyx, the tubular (instead
 of rotate-campanulate) corolla;
 and the elongated (instead of glo-
 bose or didymous) stigma; and the
 terminal inflorescence. The tri-
 carpellary ovary proves to be barely

a subsidiary character, not being at all constant in L. fragrans, and probably not in L. sessilis. But the same collection which has supplied this important information, also furnishes (as does Koenig's later collection of later date) good specimens of a third species which almost exactly fills the interval between the two genera. Now, with the general habit and foliage, and the dicarpellary pistil of Geniostoma, it combines the elongated corolla, the clavate stigma, and the terminal inflorescence of Labordea. The last three characters, taken together will surely outweigh that of the calyx, and require the annexation of this ambiguous species to Labordea, unless, indeed we merge the latter genus in Geniostoma, which for the present would hardly be warranted. I commence the enumeration with this connecting species.

Sp. Nov. (Tab. .)

1. Labordea (Geniostomoides) tinifolia,

L. glaberrima; ramis gracilibus; foliis oblongis chartaceis longiuscule petiolatis; cyma pedunculata composita laxiflora; calycis alte 5-fidi segmentis triangulari-oratis acuminatis tinnimis corollae hypocraterimorphae tubo triplo brevioribus; stylo gracili; stigmate elongato-clavato; capsula globosa bivalvi.

Hab. Sandwich Island; Mountains of Kauai; in flower: Mountains behind Honolulu, Oahu; in fruit.

Also collected by Kuny in Oahu,
Hawaii, and Maui, in flower and
fruit.

A glabrous shrub, with rather
branches, leafy. Leaves oblong, ellip-
tical, or lanceolate-oblong, 2 to 4
inches in length, 9 to 18 lines broad,
chartaceous or thin coriaceous in tex-
ture, opaque, with slender and
inconspicuous veins (those of the
upper face hardly visible, obtuse
or acute at both ends, sometimes
acuminate: petioles about half an
inch long. Stipules short, vaginate,
truncate, nearly free from the petioles.
Peduncle terminal, about half an
inch long ^{when} in flower, about twice
that length in fruit, byrne re-
peatedly trichotomous, rather loosely
flowered: the divisions and pedicels
slender: bracts subulate, small.

Calyx deeply 5-cleft; the lobes
triangular-ovate, and acuminate,
imbricated in aestivation, coriaceous,
about a line in length, ^{persistent beneath the capsule.} Corolla
subcoriaceous, white or whitish?
hypocrateriform; the tube pilose
inside, 3 lines long; the lobes ovate,
^{rather obtuse,} ~~acute~~, bearded ~~near~~ within near
the base, rather strongly convolute
in aestivation, ^{widely spreading in anthesis,} the furthers line ar-
oblong. Style filiform, sur-
mounted by an elongated-clavate
pubescent stigma. Ovary 2-celled;
ovules amphitropous, sessile on the
thickish placenta. Capsule
globose, 5 lines long, wholly that
of Seneciostrana; the valves very
thick and cartilaginous, separating
from the ovate didymous fleshy
placenta, in which the obovate
seeds are imbedded. Embryo cyl-
indric, little shorter than the

Dott

fleshy albumen; cotyledons small.
 Hawaiian plant reported by Benthams to his
 I suppose this to be the Geniostoma
ma crassifolium, var. glaberrimum,
 if the specimen really came from the
 Sandrich Islands. In fruit the
 present plant could be distinguished
 from Geniostoma only by the ter-
 minal inflorescence. If referred to
 that genus, ^{as it might be,} the original Labordea
 would have to follow it.

Plate , Labordea tinifolia,
 in fruit, and, Fig. 1, a branchlet in flower.
 2, Diagram of the aestivation. 3, Flower-
 bud. 4, Expanded flower. 5, Corolla and
 stamens displayed. 6, Calyx and pistil.
 7, Section of the ovary and calyx. 8, The
 fruit, dehiscent. 9, Transverse section of the
 pulpy placenta. 10, Seed. 11, ~~And~~ Longitu-
 dinal section of the same, showing the
 embryo. All the details magnified.

2. Labordea fagraeidea, Gandich. (Tab.)

L. glabra, pallida; foliis ovato-oblongis ~~sem~~ oblongis basi in petiolum brev^{iusculum}~~er~~ attenuatis penninerviis subcoriaceis; cyma sessili, ^{quasi} umbellato-contracta; calyce fere 5-secto, sepalis lanceolatis foliaceis nervosis (tutum) corollae adaequantibus; stigmatibus elongatis subclavatis.

Labordea fagraeidea, Gandich.

Bot. Voy. Freyc. p. 449, t. 60;
DC. Prodr. 9, p. 21; Benth. in
Journ. Linn. Soc. 1, p. 83, 114.

Hab. Woods, in the district of
Puna, and near the crater Lua
Pele, Hawaii, ^{in blossom,} Gandichand.

This, rather than the next,
I take to be Gandichand's original

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Labordea, because it is ^{entirely} glabrous, and so well answers to the published figure of the plant. But the branches are more slender than in the plate, perhaps from growing in deeper shade; and the sepals are not united to the middle; ~~as in~~ that I suppose to be a mistake of the artist. Moreover, the stigma is long and slenderly clavate (not conical as Gandichaud represents it; the style is ^{often} long and slender, but then the ovary seems to be sterile, but in specimens with ^{an} enlarging ovary it is only half as long as the stigma; the ovary is commonly only two-celled; but Dr Bureau finds it to be in ^{the three} ~~the~~ flower-buds of Gandichaud's specimen which he dissected. Finally our specimens were gathered on Hawaii, but those of the following species

on Oahu, where Gandichan obtained his original plant.

If this should prove not to be the original G. fagraeidea, it should be named G. asclepiadea.

The inflorescence is a true cyme, but much contracted; its short branches and ~~the~~ pedicels bearing slender, linear-nubitate bracts, as in Gandichan's plate, fig. 1. The flowers are nodding in anthesis. Sepals almost distinct, 5 or 6 lines long, foliaceous, with a very narrow hyaline margin, lanceolate, some of them varying to linear or to narrowly oblong, narrowly imbricated in activation, connivent, at first as long as the undeveloped corolla, at length not longer than its tube. Lobes of the corolla oblong acute, becoming lanceolate with age. Their narrow and thin edges convolutedly overlapping in the bud,

which is ~~acutish~~ pointed and slightly contorted, in anthesis barely spreading, half the length of the tube, the inner surface somewhat bearded in the middle towards the base. Ovules, as in its allies, amphitropous. Fruit not seen.

Plat. Labordea fagarioides. Fig. 1. Diagram of the activation. 2. The

3. Labordea ^{sessilis, sp. nov. (Tab.)} ~~crassifolia, sp. nov.~~

L. foliis subsessilibus oblongis
sem lanceolato-oblongis lineato-
venosis crasso-coriaceis,
juni oribus subtus rarisque
pube brevi fusca hirsutis; sepa-
lis oblongo-lanceolatis; capsulis
brevisime pedunculatis tri-
valvibus.

Hab. Mountains behind Hmo-
lulu, Oahu: in fruit only.

unexpanded blossom. 3. Corolla and stamens displayed. 4. Anther. 5. A dicarpellary pistil, the ovary transversely divided. 6. A more enlarged transverse section of the ovary. 7. The ovule. — All magnified.

Two fruiting branchlets and a young sterile branch only were gathered of this ~~plant~~ species.

These are stout, as in Gandich-
and's figure. But, besides the
pubescence, on which small
reliance can be placed, ~~the~~ ^{by the}
and ~~the~~ thick ^{ness} and rigid ^{ity of the} leaves,
the latter are sessile or nearly
so. ^{The stipules are conspicuous.} The sepals appear to re-
semble those of the foregoing
species, but are ^{shorter and} less foliaceous,
and are pubescent. Fructifer-
ous peduncles shorter than the
capsules, which are ~~globose~~,
ovate-globose, over half an inch
long; the valves thick, towards
the summit carinate on the back,
and tipped with a portion of the
style, ~~in Placenta in dehiscence~~
dehiscence ~~falling away~~ ^{separating} from the
three conjoined fleshy placenta,
which fill the cell, and, as in

Geniostoma completely enclose in their substance the numerous seeds. These are obovate, smooth, over half a line in length, with a cylindrical embryo, ^{occupying} almost the length of the fleshy albumen. The plate represents the principal ~~details~~ details. This species is interesting as demonstrating that a tricarpellary ovary is not a mere accidental, abnormal state.

Plate . Labordea sessilis;
^{dehiscent} foliage and fruit. 8, Placenta in the dry state. 9, The same after soaking. 10, Transverse section of the same. 11, A seed. 12, Longitudinal section of the same, showing the embryo. The details magnified.

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Besides these, a specimen was collected in the forest on the slope of Mouna Kea, Hawaii, which is evidently a congener of the ^{two} preceding species, but too imperfect for determination. It may be a variety of *L. fragrans*, with somewhat of the pubescence of *L. semilis*. The branches are stout; the leaves accord with those in Gandichand's plate, but are larger, 4 to 6 inches long, membranaceous in texture, on petioles half an inch in length. The remains of one or two fruits upon the contracted umbelliform cyme indicate a two-valved, oblong-ovate, compressed, pointed capsule, with thinner walls than in allied species; and a calyx with linear-lanceolate or siliolate divisions, only 3 lines in length. It would be rash to characterize a third species upon such materials, nor should I be justified in referring the plant to *L. fragrans*.

(Jah.)
2. *Adiantum fagax*, Benth.
2. *glabra*; filio *officinali* non
obscuro - *officinali* habi in *petiolum*
breve attenuato *perimbrato*;
filio ad *apicem* *ramorum*
~~*multis* *glomeratis*~~

5. Fagraea, Thunb.

1. Fagraea Berteriana, Gray. (Tab.)

4. foliis obovatis sem obovato-oblongis
raro oblongis obtusissimis vel
abrupte brevis acuminatis basi
acutis vel acutiusculis in petio-
lum longiusculum contractis
crasso-coriaceis, venis subtus
vel utrinque obsoletis; cyma
corymbosa trichotoma multi-
flora; corollae 5-6- mere pallide
aurantiaca tubo superne leviter
ampliatus ^{calyce} 3-5-plo longiore; stigmati
bilamellato!

Farissa? grandis, Bertero, mus.;
Guillen, Zeph. Jact. p. 48.

Fagraea Berteriana, Gray in
Benth. Logan. l.c. p. 98.

Hab. Society Islands, on the
mountains of Tahiti and Bimeo, Tan-
gatabu. Upolu, Samoan Islands.
~~Sandatwood Bay and Rerua, Feejee~~
Islands, in fruit: but flowering
specimens have recently been collec-
ted by Professor Harvey.

A tall shrub or small
tree, with stout branchlets.
Leaves 6 or 7 inches long, $2\frac{1}{2}$ to 4
inches broad, of a thick coriaceous
texture, perhaps somewhat fleshy
in the living plant, obovate in-
clining to oblong or broadly oval, with
a rounded or somewhat abruptly
pointed summit, and a tapering or
barely acutish base, the veins obsolete
underneath, but sometimes apparent
on the upper surface. Petioles one
or two inches long, their bases dilate-
ted into the short and thick ~~anther~~

stipular appendage. (By me le-
 minal, corymbose, brachiate-trichoto-
 mous and many-flowered, or sometimes
 simpler and rather few-flowered. Calyx
 thick, half an inch long; the
 ovate-obicular lobes quinque-
 cially imbricated. Corolla said
 to be pale orange-color; the tube
 $1\frac{1}{2}$ to 2 inches, or in Samoan
 specimens even 3 inches, in length,
 at first somewhat curved above,
 at length straight, narrow and very
 gradually and slightly dilated toward
 the summit, and from three to five
 times the length of the spreading
 lobes, so that the ~~form~~ corolla
 is nearly salver-shaped; the lobes
 are generally 6 in the specimens from
 the Society Islands, and 5 in the
 others, obovate-oval, convolute in
 aestivation. Stamens as many
 as the lobes, nearly included;
 anthers ^{erect, as} linear, ^{as wide,} thick, acute,
 introrse, attached just above the

Alfred, I have been thinking
of you, and hope you are
happy and well. I have
it and also much to
thank you.

bifid base to the short filament.
 Style filiform, about the length
 of the tube of the corolla, its apex
 abruptly dilated into ^{2 lobes} long obovate plane
 lobes or lamellae, the inner sur-
 face of which is stigmatose. Ovary
 ovoid, incompletely 2-celled; the
 lamellar placenta meeting in the
 axis but not uniting. Ovules
 innumerable, amphitropous. Fruit
 an ^{fleshy} ovate berry ^{1 1/2} inches long, ^{naked at the apex,} ^{probably} 2 inches long, ^{many} ^{seeds}. Seed obovate with the
 micropylar extremity narrow, slightly
 curved, amphitropous, but the hilum
 nearer the micropyle; the testa
 roughened, crustaceous. Embryo
 small, in fleshy albumen, about one third
 as long as the length of it, cylindrical, slightly
 curved opposite the slight curvature of the seed;
 cotyledons minute.

This species appears to have
 a wide range in Polynesia. It
 can hardly be any of Blume's, ~~not~~
 certainly not his *H. tubulosa*, which is
 particularly described as having the
 depressed peltate stigma of the genus;
 nor any form of *H. Reylanica* (to which
 the corolla is similar though smaller,
 but variable in size), for the same
 reason; nor Duck's *H. carnosa*,
 which is said to have a four-lobed
 stigma; but it is in fact remark-
 ably distinguished from all others by
 its bilamellar stigma, like
 that of *Lisianthus*.

Plate *Tagaea Berteriana* the
 form with the shorter corolla. Fig. 1. A flower
 with the longer corolla, of the natural
 size. 2. The same laid open. 3. A
 stamen seen from the outside. 4. Same
 from the inside. 5. Pistil. 6. Stigma.
 7. Transverse section of the ovary. 8. Fruit
 of the natural size. 9. Seed. 10. Vertical
 section of the same, showing the embryo.
 Figures 3-7, 9, 10 more or less magnified.

2. *Fagraea gracilipes*, sp. nov. (Tab. 1)

F. foliis lato-oratis ~~sub~~ subcoriaceis
obtusis vel apiculato-acutis basi
in petiolum longum abrupte
decurrentibus; cyma terminali
sessili multiflora ^{cum floribus} foliis multo
brevioribus, divisionibus pedicellis =
que gracilibus; ^{calyce parvis;} corollae tubo
angusto superne ~~late ampliato~~
cyathi obconico-ampliata;
staminibus subsertis; stig-
mate capiteolato; ovario ~~stricto~~
proorsus uniloculari, placentis
arcte parietalibus.

Fagraea gracilipes, May in Proceed. Amer. Acad., 4, p. 35. (1859)

F. virgiflora fenzl. in Bonplandia, 1861, p. 257.

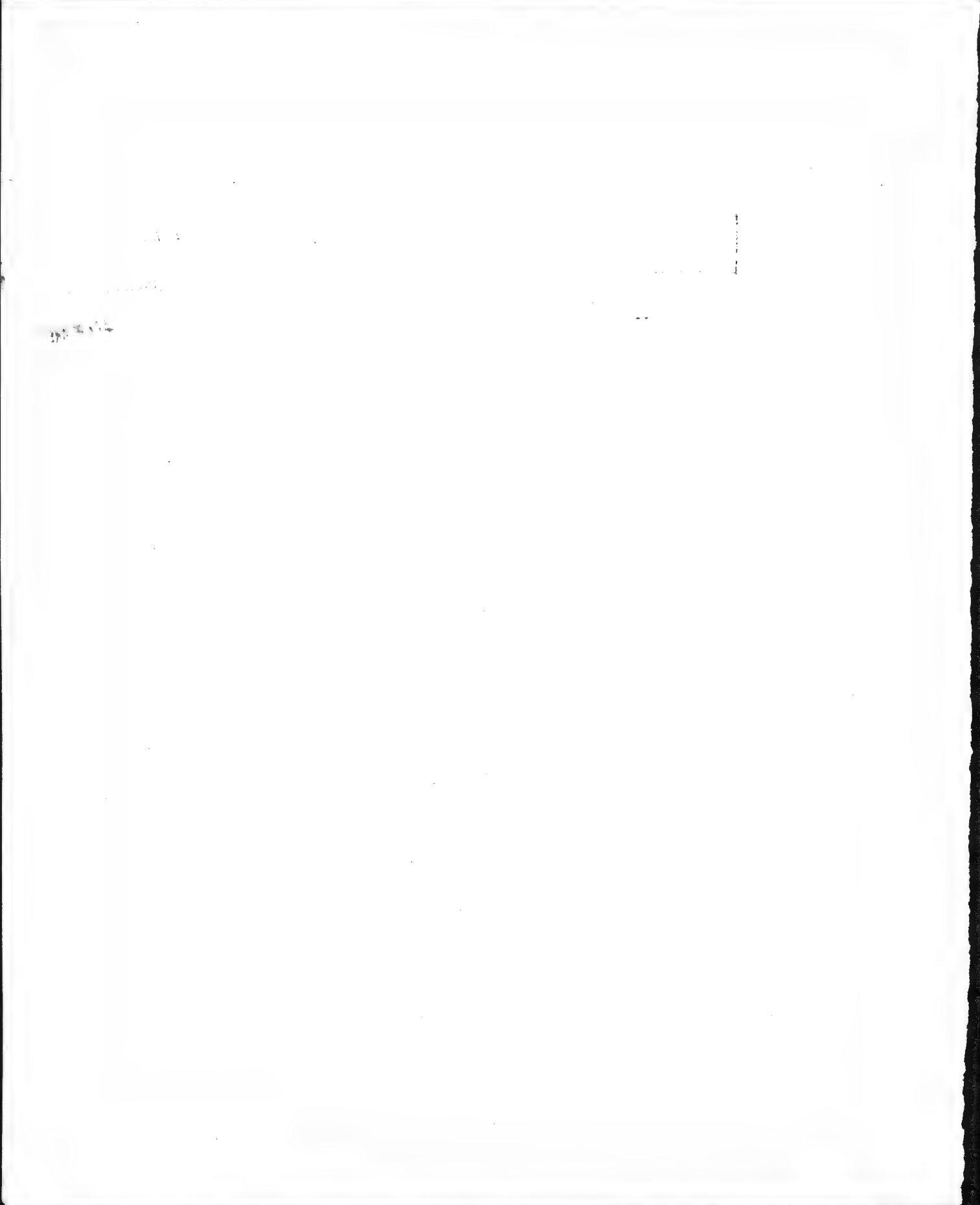
F. Tab. Sandalwood Bay and Keera

Feejee Islands. (Recently collected by Dr. Seemann, with shorter pedicels. &c.)

Shrub about 6 feet high.
Leaves crowded at the extremity of the
flowering branches, coriaceous, but

rather thin, dilated ovate, 4 to 6 inches long, $2\frac{1}{2}$ to 4 inches wide, either rounded and obscurely apiculate at the apex or more pointed, abruptly contracted at the base, marked underneath by 5 or 6 pairs of primary veins, which are indistinct on the upper surface; petioles slender, $1\frac{1}{2}$ to 2 inches long, thickened and dilated at the insertion, but with no proper stipules. Ovary (exclusive of the flowers) scarcely exceeding the petiole, sessile, compound; its divisions slender, with minute bracts; the pedicels or ultimate divisions, above the bracts, half an inch long, calyx between two and three lines in length, deeply 5-cleft; the ovate-oblong divisions thick, with scarious margins. Corolla (^{summitly} white or yellowish), of a much thinner texture than that of the preceding species, an inch and a half in length; one-third is a narrow cylindrical tube,

which is abruptly dilated into a broad
 by funnel-form or obconical
 portion, or throat, of the same length,
 bearing the 5 or 6 ~~lobes~~ spreading
 lobes of ^{about the same} ~~equal~~ length; the latter
 convolute in aestivation. Stamens
 inserted at the summit of the prope-
 tube; filaments filiform, about the
 length of the corolla; anthers oblong-
 oval, dorsally attached near the mid-
 dle, at the summit of the deep
 basal sinus, the ~~dorsal face~~
~~outer face~~ rather concave, the cells
 schiscent down the middle of their
 inner face. Style filiform,
^{at length} as long as the corolla, at first
 straight, the summit later incur-
 ved after anthesis; stigma small
 depressed-capitate, very slightly dilated
 and obscurely ^{marginate}. Ovary ovate, strictly one-
 celled; the two narrowly bitamellar
 placenta sessile, and so appear-
 ing like four placenta closely
 approximate in pairs. Ovules an-



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trumpets, very numerous. ^{not seen} Fruit
~~(close with the flowering specimens)~~
~~globose-ovoid, obtuse, one-celled,~~
~~externally resembling that of *G. Benthiana*,~~
~~as also do the seeds,~~

Well does Benthham remark
that ~~white~~, on the one hand,
while "*Hayraas* may almost
be characterized as *Gardenias*
with a free ovary", on the other
the genus forms the nearest real
approach in the whole family
to *Gentianeae*. Comparing it with
some species of *Lisianthus*, the
chief ordinal distinction consists
in the greater development of the pla-
centa and fleshy fruit." In ~~this~~
the present species we find the
bicornal placenta as strictly pa-
rietal as in most *Gentianeae*, -
much more so than in *Lisi-*

anthers, itself. *Lagras*, also, have the
 properties of *Gentianaceae*.

The corolla in Plate (which
 was engraved before the collection passed
 into my hands) represents the corolla
 as too regularly funnel-form, the
 tube gradually ^{and too widely} expanding ~~into the~~
 upwards. A more correct delineation
 of the shape of the corolla is
 added in figure 1.

Plate B. *Lagras gracilipes*. Fig.

1. A flower, of the natural size and
 shape. 2. The corolla laid open. 3. A
 magnified stamen, seen ~~from~~ dorsally. 4. Ven-
 tral view of the same. 5. Pistil magnified.
 6 Magnified transverse section of the ovary.

Lagras Niliensis, Seem., in Bonpl.
 l.c., is a third species of the Feejee Islands,
 of which my specimen is insufficient
 for determining the relationship.

37-38

Gouthoria

Calyx quinquepartitus, segmentis imbricatis rotundatis crassis, marginibus tenuibus. Corolla brevis, quinquesida, aestivatione valvata. Stamina 5, tubo vel fauci inserta: filamenta brevia vel brevissima: antherae oblongae. Ovarium biloculare, ovatum, stylo apiculatum: stigma subcapitatum, bilobum. Ovula in placentis medio dissepimento adnatis plurima, amphitropa. Fructus clavatus, drupaceus, basi attenuatus, sarcocarpio tenui, putamine lignoso percrasso, 2-1-loculari, 2-1-sperma. Semina Arbores Vitienses, glabri, stipulis *Labordeae*, foliis subcoriaceis penninerviis obovatis, cyma terminali e radiis 2-4 apice multifloris, floribus parvis hand pedicellatis, corolla fere *Strychnarum* breviflorarum.

Gouthoria, Gray in Proceid.
Ann. Acad. 4, p. 36, 45, p.
320.

Since the publication, in 1859
(supra cit.) of a portion of my
observations upon the *Loganiaceae*
of the Expedition, Dr. Seemann
in his visit to the Fee-
jee Islands has fortunately collected
flowering specimens of this,
and of another very nearly related
but ^{perhaps} ~~probably~~ distinct species: also
full-grown fruit of the former,

These materials confirm the genus as a very distinct one, and fix its position in the neighborhood of *Strychnos*,—calling however ^{for} some extension of the character of Benthams third tribe. There are indications of dimorphism or incipient difference in sexes in the flowers examined. In different blossoms of the same cyme of *C. cony-*
~~say~~ no carpa, some corollas are beardless or nearly so and have the anthers nearly sessile ~~on~~ the throat, while others are conspicuously bearded in the throat, and their equally subexserted anthers are borne on filaments of their own length inserted some way down on the tube; the style also is sometimes slender and exserted, when I suspect the ovary is infertile or less fertile, and sometimes shorter or

even very short, and then the
ovary is surely futile.

(Tab.)

1. *Gonioria corynocarpa*, Sp. M.

6. Calycis segmentis ciliolatis;
antheris ~~sagittatis~~ oblongis
utrinque emarginatis.

Gartnera pyramidalis, Seem.,
in *Bourplandia*, 1851, p. 257,
no. 303.

Hab, Feejee Island; at Oro-
lau and Sandal-wood Bay.

A shrub or tree, glabrous ~~throughout~~
throughout. Leaves opposite, cori-
aceous, but rather thin, petiolate,
obovate-oval or oblong, obtuse,
(3 to 5 inches long, 1 1/2 to 4 inches broad)
entire; the midrib and four or
five pairs of primary veins rather
prominent on both sides, the
veinlets inconspicuous. Stipules
conspicuous, forming a truncate
sheath ^{3 lines in height} coriaceous with the petioles,
and somewhat higher between them.
Inflorescence a terminal, sessile
or short-peduncled, umbellately
3-4-radiate, ~~cyme~~ naked cyme;
its primary divisions an inch or
more in length; the flowers sessile
on the ultimate divisions. Bracts
obscure or deciduous. Calyx hardly
above a line in length, exactly that
of a *Lagrea* on a diminutive scale;

(a pair of small pits or glandular spots
on the inner face of each near the base,
the lobes rotund, thin-margined,
ciliolate; Ovary ovoid, somewhat
pointed, ^{after anthesis} a little larger than the
persistent calyx, tipped with a small
entire stigma, two-celled. Placentae
thick, conformed to the shape of the

cells, fixed by their middle to the
middle of the thickish dissepimen-
ment, their whole outer face cov-
ered with amphitropous ovules.
Fruit, not yet mature, club-shaped
or fusiform and stipitate, an inch
or less in length, short-pointed,
ligneous in texture, manifestly
indehiscent, perhaps having a
thin and somewhat fleshy epicarp
when mature, but ~~prob~~ apparently
mucumtaceous; the two nar-
row cells separated by a thick lig-
neous partition. Placentae in the
specimens examined ~~thin~~ rather thin,
and with the margins recurved.
No seeds were found. The corolla

and stamens had fallen from all the specimens.

As perfect as are the materials of this plant, I cannot doubt that it is a new generic type in Loganiaceae, of Apocynoid affinity, which does not fall in to any of Benthams tribes as at present constituted. The corolla and stamens are needed to settle the particular relationship of this curious plant.

The genus is dedicated to the ardent and enterprising Conchologist, Joseph P. Benthony, Esq., ~~the~~ one of the Naturalists of the Expedition.

To the above I have to add that flowers, now furnished by Dr. Seemann, but not in very good state of preservation, pretty closely resemble those of the following species (if such it be), except that the ~~the~~ sepals are

minutely ciliate, and the ^(oblong) anthers
~~oblong~~, very obtuse at both ends;
~~and~~ the beard of the throat of the
corolla either obsolete or conspic-
uous (as already noticed), but
not so strong as in Seemann's
no 305. The style, also, com-
monly equals the corolla in length
^{while in our specimens it is short and thick, for}
^{rather any} but this. I am confident, is a

subsexual distinction. The nearly
mature fruit, of my specimen from
Dr. Seemann is almost two inches
long, obovate-clavate, attenuate and
flattened at the base, coated with a
thin and closely adherent epicarp, which
is ~~doubtless~~ apparently fleshy in the
fresh plant, while the whole interior
is a ligneous putamen, by abor-
tion one-celled, the cell scarcely
more than a line in diameter, filled
with a single ~~cylindrical~~ appa-
rently albuminous seed, the structure

I have not sufficient materials
for investigating.

Plate

Coultrovia coryno-

carpa. Fig. 1. Portion of inflorescence, with
a fruit, and calyxes with the pistil after the
fall of the corolla. 2. Inside view of a sepal.
3. Vertical section of calyx and pistil. 4. A
vertical section of a pistil showing the placenta
of one cell, covered with ovules. 5. Transverse

section of the ovary. 6. Vertical sec-
tion of a fruit, dividing the placenta.
7. Transverse section of the fruit and
recurved (sterile) placenta.

2. Gortneria Seemannii.

C. calycis segmentis ~~the~~ marginibus
glaberrimis; antheris subsagittatis;
~~A~~ corollae fauce eximie
albo-barbatis, an semper?

Gortnera barbata, Seem. l.c. no. 305.

Itab. Fieje Islands, Dr. Seemann.
In blossom only.

Folige, L. as of C. corymbosa,
of which, probably it may be only
a variety. Calyx & ~~deep~~ 5-parted, the
lobes orbicular, with ^{thin and} glabrous edges,
half a line long, not glandular ~~is~~
inside. Corolla white? two lines in
length, 5-cleft to the middle. The lobes
ovate, valvate in aestivation. The
excessively villose bearded with white
villose hairs. Stamens in all the
flowers examined inserted on the middle

of the tube; the filaments about the length of the anthers; the lobes of the latter acute at the base. Ovary ovate, tapering into a short and thick style, which is tipped with a subcapitate and more or less 2-lobed stigma; the pericarp thick. Ovules numerous upon each placenta, ~~and~~ a dozen or more, amphitropous.

I suspect that the beard of the corolla will vary as in the C. conovocarpa, wherefore I have not adopted the specific name barbata.

7. Strychnos, Lin.

1. Strychnos triplinervia, Mart.

Hab. Brazil, in the vicinity of Rio Janeiro. (Foliage.)

2. Strychnos colubrina, Lin.

Hab. Mangsi Islands; a fragment in blossom and another in fruit. Direction Island, a small island of the Feejee group; in fruit; Collected by Dr. Seemann in blossom.

1. Logania, N. Br.

1. Logania floribunda, N. Br.

2. Logania pusilla, N. Br.

Stat. New South Wales, in the
vicinity of Sydney.



Virginia

March 1861

Ord. Myrsinaceae.

1. Masa, Forsk.

1. Masia memoralis, A. DC.

Masa memorialis, A. DC. in Lin.
Trans. 17, p. 134, & in DC. Prodr. 8,
p. 79.

M. Baobabys, Röem. Schult. Syst. 5, p.
226.

Baobabys (^{char.} Forsk. Gen. t. 11) memoralis,
Vahl, Symb. p. 19.

Hab. Tongatabu, and Samoa
Islands. Also Navan, S. Friendly
Islands, Dr. Harvey.

To the description of De Candolle,
which in almost all respects well
applies to our specimens, I may

add that the plant is perfectly
glabrous throughout, and the leaves
mostly oval (rather than obovate)
obtusely or rounded at both ends, or
sometimes acuminate, from 2 to
6 inches long and $1\frac{3}{4}$ to $3\frac{1}{2}$ inches wide,
smooth; and with undulate, but hardly
at all toothed margins; the Petiole $\frac{2}{3}$ -
to $1\frac{1}{2}$ inches long. Racemes 2 or 3 inches
long, rather loosely flowered; the pedic-
els mostly divaricate, pentangular,
 $1\frac{1}{2}$ lines long. Bracts, bractlets, and calyx-
lobes broadly ovate and obtuse, espe-
cially the latter. Lobes of the corolla
quinque-lobed in aestivation, two exterior
Drupes 2 lines in diameter, globe-
lar-ovoid.

2. Masa Pickeringii, Sp. nov.

M. foliis lato-lanceolatis oblongisve subintegerrimis max glabris, nascentibus ramulisque pilosis; ~~racem~~ racemis axillaribus simplicibus variisve compositis gracilibus; calyce cum bracteis ovato-subulatis hirsuto, lobis ovatis acutis corollae tubum subaequantibus; drupis ovoides.

Stat. Feejee Island; on the north side of Viti-levu.

Besides the hairy pubescence of the inflorescence, and especially of the calyx, this differs from the preceding in the narrower leaves, varying from lanceolate to elongated-oblong, smaller flowers, narrower and acute bracts and bractlets, &c. Pedicels barely a line long, twice the length of the bract.

~~And the following.~~

3. Mesa pericarpa, Sp. nov.

M. glabra; foliis lato-lanceolatis integerrimis, venis transversis; paniculis axillaribus folio subbrevioribus; floribus paucis; breviter pedicellatis; bracteis bracteolis lobisque calycis ovato-acutis; corollae tubo campanulato calyce paullo longiori; seminis ovoides-globosis brevissime pedicellatis.

Hab. Feejee Islands, at Abria Bay, in flower. Collected by Professor Harvey in fruit. A flowering specimen; somewhat like M. ramentacea, but with narrower leaves (3 or 4 inches long and at most $1\frac{1}{4}$ wide), oblong-lanceolate, the primary veins (9 to 13 pairs) nearly transverse. Racemes panicle, slender, glabrous but minutely glandular: pe-

dicels half a line long, ^{a little} longer than the bract. Lobes of the calyx acute (not very obtuse, ^{they are} as in *M. ramentacea*). Corolla half a line in diameter. Drupes, in Prof. Harvey's specimens, at most a line and a half in diameter, subsessile.

No. 287 of Dr. Seemann's recent Heze Collection, referred in his list to "*M. Indica*, var." is ~~possibly~~ ^{perhaps} a form approaches ~~of~~ *M. persicaefolia*, but the pedicels are longer, and the leaves broader, of thicker texture, and the primary ^{veins} much more ascending.

4. *Masa ovata*, A. DC.

Hab. Singapore. Imperfect specimens.

5. *Masa Indica*, A. DC. l.c.

Hab. Luzon, Philippine Islands, in the mountains near Manila; the variety *Nighiliana*, like Burnings' plant.

Dr. Seemann's no. 286, from the Heze Islands, as to the large-leaved and somewhat pubescent plant, is hardly *M. Indica*; the glabrous and small-leaved specimens are probably belong to *M. nemoralis*, (which Dr. Harvey also collected)

b. Masa corylifolia, Sp. Nov.

M. foliis ovatis cordatis repando-
dentatis cum raris paniculisque
(terminalibus et axillaribus folium
adæquantibus) dense mollissime
^{superius} pubescentibus; ^{max glabris} pedicellis flore
hæud longioribus; bracteis bracteo-
lisque ovato-subulatis parvis;
calycis lobis triangulari-ovatis
villosis tubum corollæ brevi-
campanulatae fere æquantibus
(drupis ovoides puberis).

Hab. Feejee Islands; on the
mountains of Muthuata, at the
elevation of 1000 feet.

"A weak shrub", with a very
soft, fulvous, villous pubescence.
Leaves ovate or ovate-oblong, and
cordate with a narrow sinus, 3 or
4 inches long, $1\frac{1}{2}$ to $2\frac{1}{2}$ inches wide,

more or less acuminate, either strongly and sharply or rather obscurely, repand-dentate, very velvety to the touch, especially underneath, above becoming glabrous with age; the primary veins conspicuous, spreading; petioles half an inch or an inch long. Panicle of numerous racemes; pedicels rarely more than half a line long, about the length of the calyx; ~~the~~ the latter adherent nearly to the summit of the ovary, its broad lobes acutish, bract very short-campanulate, when expanded nearly a line and a half in diameter, the lobes ovate-round. Fruit unknown.

Dr. Seemann has recently collected and distributed printing specimens of this (no. 288, sub nom. M. macrophylla?): the drupes are ovoid, a line and a half long, and retain the pubescence of the ovary. It is quite distinct from M. macrophylla.

2. Samara, Lin.

1. Samara aurantiaca?

Choripetatum aurantiacum, A. DC.
in Lin. Trans. 17, p. 131, & Boiss.,
8, p. 88?

Stat. Small Island in the Sooloo Sea. Specimens in fruit only, of doubtful identification.

3. Embelia, Burm.

1. Embelia Nibes, Burm.

Stat. Singapore. In fruit.

4. Myrsine, Lin.

1. Myrsine umbellata, Mart., Miq.

Myrsine umbellata, monticola, Daphni-
tes, & glomeriflora (Mart., Hort. Fl. Bras.)
& Martiana, A. DC. Prodr. 8, p. 101.

M. umbellata, Miq. Fl. Bras. Mys.
p. 310, t. 55.

Stat. Brazil, near Rio Janeiro;
the variety vulgaris of Miquel in
the Flora Brasiliensis, t. 55, f. 1.

M. Richardiana, Endl. in Ann.
Wien. Mus. 1, p. 171.

Suttonia australis, A. Rich. Fl.
N. Zed. p. 349, t. 38; Hook. f. Fl. N.
Zed. 1, p. 172.

Stat. Bay of Islands, New Zealand.

5. Myrsine divaricata, A. Cunn.

Myrsine divaricata, A. Cunn. Prodr.
Fl. N. Zed. p. 47; A. D. C. l. c.

Suttonia divaricata, Hook. f. Fl. Antares.
1, p. 51, t. 34, & Fl. N. Zed. 1, p. 173.

Stat. Waiapu Bay, New Zealand.
Auckland Islands. In fruit.

Neither the stigma nor the poly-
petalous corolla will distinguish ~~the~~
Suttonia from Myrsine. As to the
reduction of the ovules to one or two,

2 Myrsine Manglilla, Koenig & Schult.

Hab. Peru, in the vicinity of Lima and Callao.

3. Myrsine salicina, Stewart.

Myrsine salicina, Stewart in Hook.

Land. Jour. Bot., 1, p. 283.

Suttonia salicina, Hook. f. Fl. N. Zed.

1, p. 172, t. 44.

Hab. Bay of Islands, New Zealand.
With undeveloped inflorescence.

4. Myrsine Mvilliei, A. D. C.

Myrsine Mvilliei, A. D. C. in Linn. Trans.

17, p. 105, & Prodr., 8, p. 94.

Dr. Hooker figures four in his
S. nummularia.

b. Myrsine Lessertiana, A. DC.

M. glabra; foliis crasso-coriaceis
oblongo-lanceolatis seu obovato-
spathulatis integerrimis costato-
venosis nervo juxta marginali cinctis,
petiolo brevissimo crasso; pedicellis
2-5-nis, puctiferis drupa subglobosa
longioribus; calycis lobis
obtusissimis ciliolatis; corolla
5-petala aestivatione valvata.

Var. a. foliis oblongo-lanceolatis
seu elongato-ellipticis utrinque
angustatis acuminatis,
Myrsine Lessertiana, A. DC. Prodr. 8,
p. 96.

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Var. β . foliis oblongis basi cuneatis vel cuneato-obovatis plerumque obtusis.

Hab. Sandwich Islands; on the mountains behind ^{Honolulu} Oahu (where it was gathered by Sandichand, Kony, &c.); also Hawaii, in the District of Puna, and on Mouna Kea, at the elevation of 6000 feet.

According to Dr. Pickering this species on Oahu ^{is a large tree on the high mountains} is a shrub, on Hawaii, a tree, forty feet high. One specimen, from Oahu, having lanceolate-oblong leaves tapering to both ends ($2\frac{1}{2}$ to 3 inches long and 7 to 12 lines wide) accords with Sandichand's plant upon which Seem-doll founded his M. Lessertiana. The others have more or less ovate or cuneate-oblong and obtuse, or even

retuse, leaves, the largest 5 or 6 inches long and 2 or 3 inches wide, thick and coriaceous, the margin somewhat revolute. One specimen bearing flower-bud (from 2 to 5 from the same general ~~tree~~ scaly bud) in the axils of the older leaves, enables me to ascertain that the petals are distinct to the base, and are valvate in aestivation. The corolla is glabular in the bud and then scarcely hardly exceeds the already open divisions of the calyx. Pedicels in flower a line or a line and a half long, in fruit $2\frac{1}{2}$ to 4 lines long. Drupes as large as peas, when mature nearly spherical, apiculate.

7. Myrsine Sandwicensis A. B. l. c.

Hab. Sandwich Island; Oahu,
in the mountains behind Honolulu;
and Hawaii, ^{District of Puna,} near the Great Crater,
Is. Also, probably the same species,
on the mountains of Kauai, with-
out flowers or fruit.

This, according to Dr. Pickering
forms a ^{shrub 6-12 feet high} small tree, thirty feet
high, with the trunk a
foot in diameter; the leaves be-
aptly compares with those of
Uva-ursi. Many of them are no
larger; the longest are an inch and
a half in length. The narrow-leaved
form mentioned by Dr. Pickering (
the most slender oblanceolate and
only 2 or 3 lines broad), which was
long since collected by Macrae, with-
out flowers or fruit, passes freely
into those with obovate-cuneate

leaves. Dr. Pickering notes the flowers as "small and purplish". The specimens furnish a single flower-bud, which in structure accords with the foregoing species, the petals being distinct to the base and valvate in aestivation. Here the difference between a deeply parted and a polypetalous corolla is evidently not of generic ~~consequence~~ importance. De Candolle's tribe Embeliceae, ^{manifestly} ~~clearly~~ should be suppressed, along with his two suborders, which do not merit such a distinction.

I have seen nothing answering to M. Gandichandii, A. D. C., with subseriate ~~flowers~~ fruits and triangular acute calyx-lobes.

8. Myrsine Tahitensis, Sp. Nov.

M. glaberrima; foliis crasso-coriaceis oblongo-ellipticis sen ovalibus integerrimis utrinque obtusis brevis-sime petiolatis supra nitidis utrinque crebre costato-venosis, venis venulisque reticulatis prominulis; pedicellis fructu longioribus; calycis fructiferi lobis 4 triangulari-oratis acutiusculis.

Hal. Society Islands, in the mountains of Tahiti.

A specimen with full-grown fruit; the leaves thick and coriaceous, 3 to 5 inches long by $1\frac{1}{2}$ to $2\frac{1}{2}$ inches wide, ~~and~~ ^{on} very short petioles; the primary veins 20 to 30 pairs, conspicuous, especially on the shining upper surface, connected by conspicuous reticulated veinlets, loosely

17 17

anastomosing towards the margin, but not forming so distinct an intra-marginal false vein as in M. Lessertiana. Pedicels several in a fascicle from a sessile & caly bud, in fruit 3 lines long; the persistent calyx not ciliate. Flowers unknown.

9. Mysine crassifolia, R. Br.

Mysine crassifolia, R. Br. Prodr.
p. 534; A. DC. Prodr. 8. p. 96.

Hab. Mountains of Tahiti; a very imperfect specimen with young fruit. Mountain ridge of Tutuila, Samoan Islands, without flowers or fruit; but pretty well agreeing with M. crassifolia collected on Norfolk Island by Cunningham. A specimen of

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Bardley's from Ambouma appears
to be ^{the} same species, with ~~rather~~^{the}
~~longer~~ pedicels as long as the fruit.

10. Myrsine myricifolia
myricoides, Sp. M.

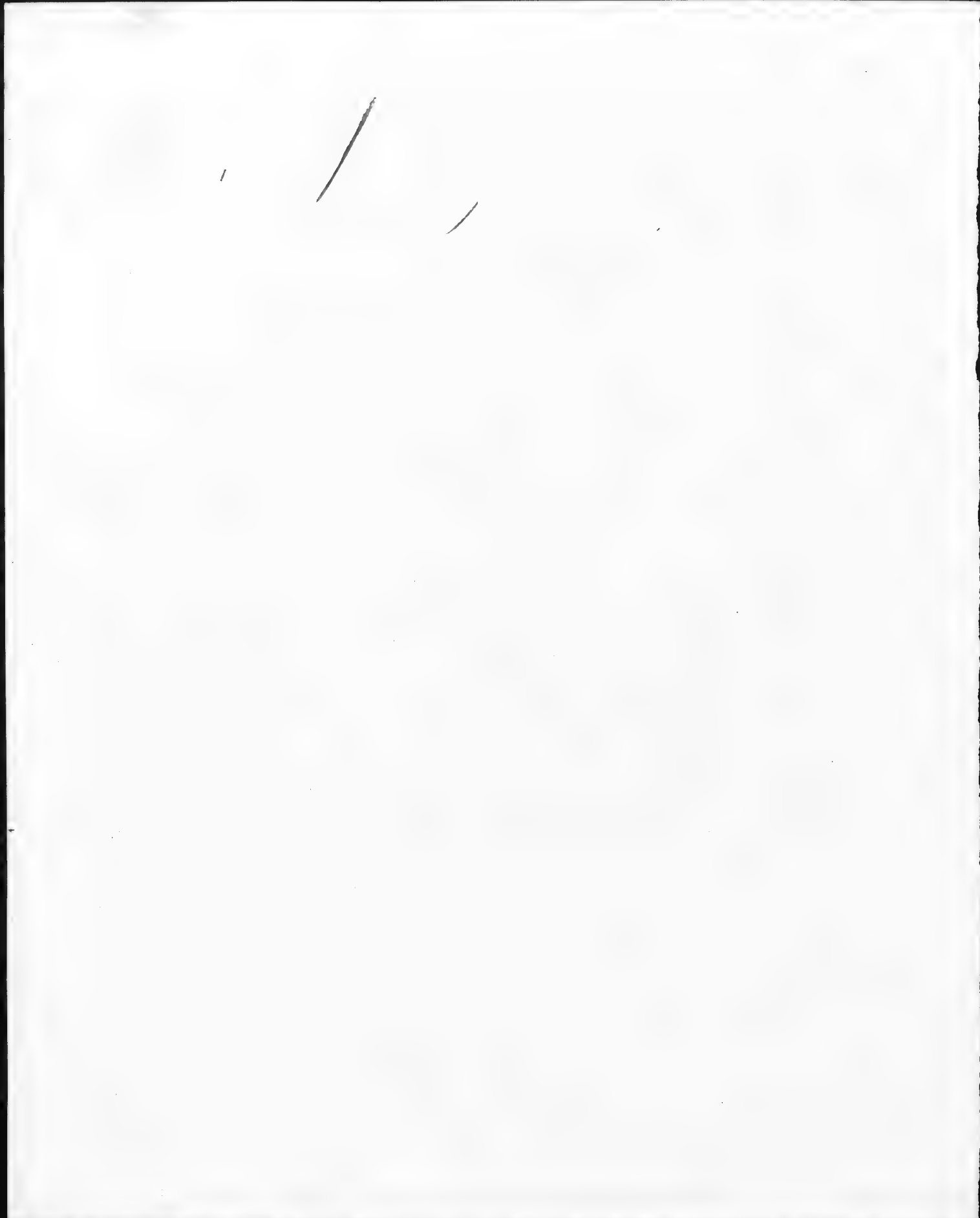
M. glaberrima; foliis subspathulatis
seu oblongis basi cuneatis in
petiolum attenuatis integerrimis
apice ^{sepius} retusis utrinque ^{crebre} punctulatis,
venis ^{vix} ~~haud~~ perspicuis; floribus
tetrameris sessilibus; calycis lobis
lato-ovatis obtusissimis; corolla
quadripartita; Infructibus globosis.

Hab. Muthuata, Feejee Island,
on the mountain-summit, at the ele-
vation of 2000 feet. Also mountains
of Vimeo, Society Islands. I have
it also from some one of the "Pacific
Islands, collected by Mr. Cunningham.

This is recorded by Dr. Pickering
as "a bushy plant, fifteen to twenty
feet high, in the Feeje Islands.
The leaves in shape and size may
be compared with those of *Myrica*
cerifera ^(and are equally variable), ~~and Gale~~, but are quite
entire, opaque, smooth, and in-
conspicuously veined, $1\frac{1}{2}$ to $2\frac{1}{4}$ or rarely
 $2\frac{1}{2}$ inches long (including the slender
petiole of 2 to 4 lines), and 4 to 8 lines
wide, thin coriaceous or chartaceous,
~~sometimes~~ ^{sometimes} ~~obovate~~ ^{obovate} ~~spatulate~~ ^{spatulate}, ~~sometimes~~ ^{sometimes} ~~lanceolate~~ ^{lanceolate}. Along
flowers 2 or 3 in a fascicle from sessile
axillary scaly buds, their pedicels even
in fruit ^{much} shorter than the calyx;
the latter smooth and obscurely if
at all ciliolate, very oblique, half
the length of the vestiges of the corolla,
the divisions of which are narrowly
oblong and rather larger than the
anthers. Stigmas subsessile, mem-
branaceous-dilated, as is common in
this genus, ~~and~~ mostly divided into

two or three petaloid lobes or crests,
Drupe globose, pointless, barely 2 lines
in diameter, ^{closely} sessile or nearly so, -
by which it may be distinguished
from any form of M. capitellata
(incl. merifolia, Korthalsii, &c.). It
may be ^{more} difficult to distinguish ^(mistakenly from) this
from M. crassifolia.

To the present species belongs the
fruiting specimens of Dr. Seemann's
no. 289 (while the female flowering
specimens are ambiguous between
this and M. crassifolia), also no.
290, foliage only.



Two or three petaloid lobes or
crests. Infruct globose, persistent,
barely 2 lines in diameter, sessile
or nearly so.

11. Myrsine? Brackenridgei, Sp. Nov.

M. glabra; foliis membranaceis ob-
longis utrinque acutis vel acu-
minatis petiolatis marginibus
integerrimis vel undulatis; pedi-
cellis filiformibus fructu ^{globo} 3-5-
plo longioribus; calyce 5- lobato,
lobis rotundatis ciliatis,

Hab. Mountains of Ovolau,
Feejee Islands.

The flowers are unknown, but
the plant is probably a Myrsine.
~~Branches stem~~ It is remarkable
for its thin and membranaceous leaves.

and slender pedicels. Branches slender. Leaves either broadly or narrowly oblong, 2 or 3 inches long, an inch or more in width, usually acuminate, minutely punctate, the margins entire, or in one set of specimens undulate, so as ⁱⁿ some leaves to appear crenately toothed: petioles 3 lines long. Pedicels fascicled in twos, ~~and threes~~ ^{or rarely fives}, or sometimes solitary, from axillary buds, the scales of which are deciduous (in the undulate-leaved form not rarely corymbed), 4 to 7 lines long. Young fruit globular, $1\frac{1}{2}$ or 2 lines in diameter, subtended by the small calyx, the lobes of which are short, rounded, and ciliate. Apparently a straggling shrub in thick woods.

12. Myrsine Africana, Lin.

Hab. Cape of Good Hope, near
Cape Town.

5. Cybianthus, Mart.

1. Cybianthus cuneifolius, Mart.

Cybianthus cuneifolius, Mart. ^(+ Zucc) M.

Gen. & Sp. 3, p. 88; A. DC. Prodr.

8, p. 116; Miq. in Mart. Fl. Bras.

Myrs. p. 293, t. 38.

Hab. Brazil, in the Organ Moun-
tains. (C. fuscus, Mart. apparently
is not specifically different.)

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b. Ardisia, Swartz.

1. Ardisia pyramidalis, Pers.

Ital. Luzon, in the mountains near Manila.

The leaves are ^{almost} ~~nearly~~ entire; the peduncles and pedicels compressed; the divisions of the calyx very broadly ovate and strongly ciliate with jointed hairs.

2. Ardisia humilis, Vahl.

Ital. Feejee Islands; in fruit. Records ^{rather well} with Indian specimens. (Dr. Seemann's no. 290 and 291, probably the same, are not in our collection.)

b. Arisa, Shantz.

1. Arisa paniculata, Nash.

Stat. Duran, Mississippi at-
and, near New Orleans.

3. Ardisia? capitata, Sp. Mw.

A. arborea? glabra; foliis ad apicem
ramorum crassorum congestis
obovato-spathulatis ultra pedalis
subcoriaceis integerrimis reticu-
lato-venulosis ^{basi} in petiolum brevem
crassum attema angustatis;
pedunculis axillaribus compres-
sis simplicissimis capitulum
strobilaceum gerentibus; ~~bracteis~~
bracteis magnis squamaceis
persistentiibus.

Stat. Ovolan, Feejee Islands.

This is probably of a peculiar genus. The single and very imperfect specimen is ~~a branch~~ the summit of a branch, half an inch in diameter, beset with large

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and contiguous leaf-scars, and with crowded leaves at the ~~sum-~~
~~mit~~ apex. These are from 12 to 16 inches long, 4 or 5 inches broad, with a very stout midrib and slender but rather conspicuous veins connected by finely reticulated veinlets, and with evident Myrsinaceous dots or glands in the meshes; the petiole an inch or less in length, very stout. Peduncles just below the leaves of the season, ancipital, about $2\frac{1}{2}$ inches long, naked except at the summit, where a rachis half an inch long bears obovate, concave, squamaceous, ~~from~~ dark-punctate, apparently persistent bracts, which are fully half an inch long. From their the flowers have fallen, leaving large scars, ~~whether of single short~~
~~pedi~~ (A memorandum by Mr.

The Academy accordingly
 at present consists of 156 Members
 of which the first class has 48,
 second class 48,
 third class 60.

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Rich, which accompanies the specimen, states that the "corolla is deeply five-cleft; the style filiform; and every part of the flower covered with pellucid dots. *

7. Aegiceras, Gartn.

1. Aegiceras majus, Gartn.

Stat. Sydney, New South Wales,
Island in the Soloo Sea.

*

Adisia grandis, Seem., ~~from~~
no. 293. from the Feeje Islands (in fruit
only) considerably resembles this in
foliage, but has the grooved panicles.

Ord. Primulaceae, Vent.

1. Primula, Linm.

1. Primula farinosa, Linm. var. Magellanica = ica, Hook. f.

Primula farinosa, L. var. Magellanica,
Hook. f. Fl. Antarc. 2, p. 337, t. 120.

P. Magellanica, Lehm. Prim. p. 62,
t. 6; Duby in Ob. Prodr. 8, p. 45.

P. decipiens, Duby, in Ob. l.c. p.
44.

(mostly in fruit.)
Ital. Orange Harbour, Isle of Georgia

Dr. Hooker has discussed at
some length the question of the
specific identity of the Antarctic
Primrose with the P. farinosa of the
Old World and the Northern Hemisphere,
and reached an affirmative
conclusion, the white corolla being

The only constant character known
to distinguish it. No form or
near relative of this species occurs
~~elsewhere~~ on the American continent between
the Antarctic regions and the north-
ern borders of the United States;—so
that this is ^{one of} ~~perhaps~~ the strongest case
that can be adduced in favor
of the hypothesis of a double or
multiple origin of species.

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2. Lysimachia, Lin.

1. Lysimachia lineariloba, Hork. & Arn.

Lysimachia lineariloba, Hork. & Arn.

Bot. Beech, Voy. p. 268, vix Zucc.

L. lubinioides, Sieb. & Zucc.

Ham. Nat. Fl. Jap. (in Mém. Acad. Monac.) 2. p. 16.

Hab. Sandwich Islands, on the coast near Hilo, Hawaii; in fruit. Collected by Kuny, in much better specimens on Maui and Nihau.

Except that the flowers (seen only in Kuny's specimens) are smaller, no notable difference appears ~~between~~ between the plant of the Sandwich Islands and ^{five} specimens gathered by Mr. C. Wright on the Looehoo Islands and also in Japan, the more luxuriant forms of which are identical with

(an authentic
one of "L. lutinioides, Sieb. & Ruess."

Distributed from the Leyden Herbarium.
But ~~it is~~ Ruess's L. linearis-
lba from the Borin Islands appears
to be different, as it is said to have
lanceolate acute sepals and pedi-
cels scarcely two lines long. Still
it very well accords with Hooker
and Arnott's brief character of
that species (the plate of which, refer-
red to in the letter-press, was not pub-
lished), except that the ^{divisions} ~~lobes~~ of the
corolla are spatulate rather than
linear. ~~As it~~ rendering the spe-
cific name rather deceptive; yet it
is hardly necessary to relinquish it
in favor of Siebold and Ruess's
~~same~~ better name of lutinioides.

The plant is herbaceous, although
the ~~base~~ ^{root} sometimes hardens, branching
from the base, the branches ascending,
mostly simple, leafy; the thickish leaves

by no means "impunctate." Rue-
carini's description (under L. lubini-
oides) ~~is a well applied, ex~~ is a
good one, except that the style is not
short, nor are the filaments in his
own plant monadelphous at the
base.

L. Lysimachia Stillebrandi, Hook. f.

L. fruticosa, glabrata, ramosa; ramis
indique foliosis; ^{alternis nunc verticillatis} foliis ellipticis ob-
longis lanceolatisve saepius acutatis
vel acuminatis subcoriaceis laxo
reticulato-venosis; pedunculis ex axillis
superioribus mutantibus unifloris
ferugineo-pubescentibus; floribus
5-8-meris; corollae subrotatae lobis
late obovatis sepala ovato-lanceo-
lata acuminata fere bis super-
excedentibus; filamentis basi mon-

6

adelphis styloque gracilibus,

Lysimachia Stillebrandi, sp. nov.
Hook. f. in litt.

Var. α . foliis ellipticis sen elliptico-
lanceolatis basi in petiolum angus-
tatis

Var. β . daphnoides; foliis oblongis
arcte sessilibus crebris.

Var. γ . angustifolia; foliis lineari-
lanceolatis creberrimis.

Stat. Sandwich Islands: on the
Mountains behind Honolulu, Oahu,
at the elevation of 2000 feet or more,
(where it was also collected by William
Stillebrand, Esq. M.D. Consul, and com-
municated to Dr. Hooker); and Mouna
Haleakala E. Maui, with a series of
narrow-leaved forms passing into Var.

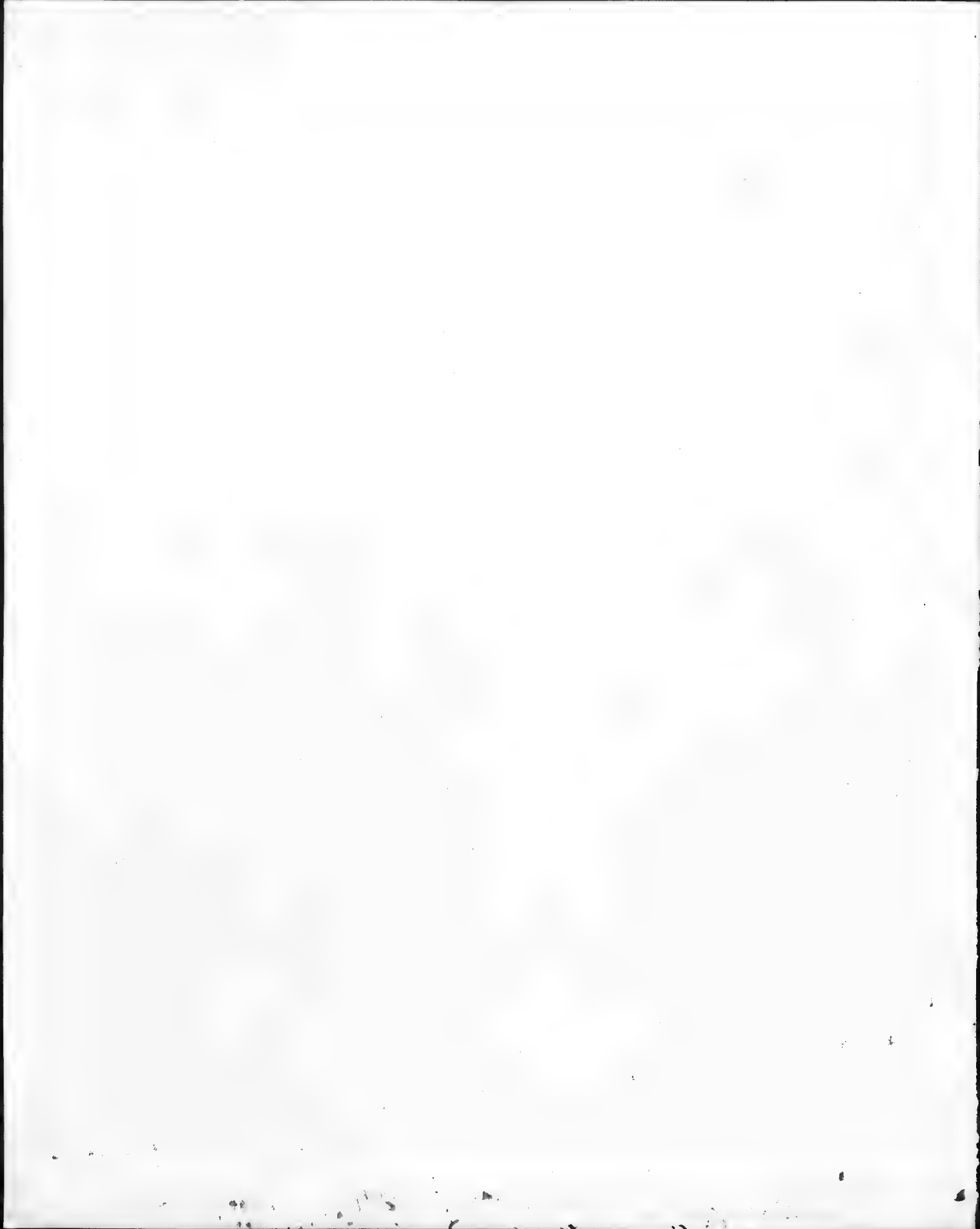
No., collected by Remy on the same island. Var. β . Mountains of Kanai.

This is a truly shrubby Primulacea and a genuine Lysimachia, attaining, I believe, several feet in height. The young ~~parts~~ shoots, the peduncles, &c. are clothed with a rusty pubescence, which is at length deciduous. ^{The branches are very leafy throughout.} The leaves are soon glabrous, and are mostly alternate; occasionally they tend to collect in whorls, and some times, especially in ~~the~~ narrow-leaved forms they become truly verticillate in ^{threes} ~~ones~~ fours, or fives. They vary greatly in shape and width, but intermediate forms connect those with the leaves $1\frac{1}{2}$ ^{to} ~~or~~ 5 inches long and 8 or 9 lines broad with the ~~for~~ variety in Remy's collection having

8

leaves an inch long and barely a line and a half wide. The broader leaves are usually acuminate at both ends, tapering at the base into a petiole of two or three lines in length, except in the variety from Kanai, in which they are sessile. Their slender veins, almost equally conspicuous on both surfaces, are finely reticulated, the extreme ramifications confluent into a juxta-marginal vein, ~~the~~ and a narrow margin is more ^{the upper surface thickly and minutely punctulate,} or less revolute; Peduncles single in the axils of the upper leaves, from 4 to 12 lines long, bractless, one-flowered, recurved toward their summit, so that the flower is pendulous. Flower sometimes pentamerous, more commonly hexamerous, heptamerous, or even octamerous; the calyx deeply parted into ovate-lanceolate, and acuminate divisions. Corolla dull purple or

flesh-color? in shape between short-funnel form and rotate; the tube a line and a half long; the rotund-obovate lobes about 3 or 4 lines long, convolute in aestivation, thickish, punctulate. Filaments inserted about the middle of the short tube of the corolla, subulate-filiform from a narrow monadelphous ring, glandular-scarious, two thirds the length of the corolla: no interposed teeth. Anthers oblong. Style as long as the stamens. Stigma subcapitate. Ovary ovoid, very numerous, crowded on the axile placenta, amphitropous, capsule globular, coriaceous, at length 5-7-valved, many-seeded.



10

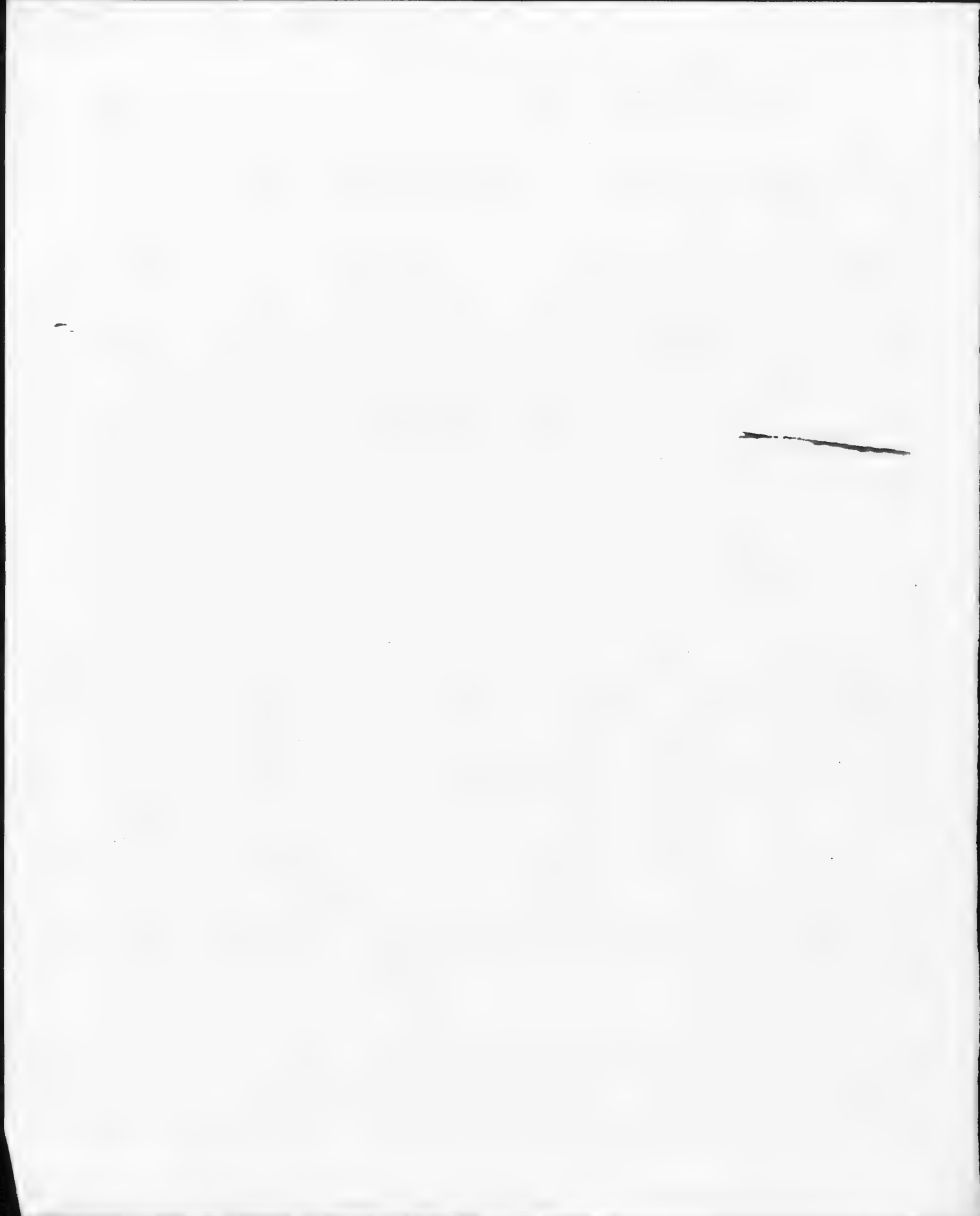
2. Aragallis, Journ.

1. Aragallis arvensis, Lin.

Stat. Rio Janeiro, Brazil, Bay of
Hounds, New Zealand, Hunter's River,
New South Wales, Introduced from
Europe.

2. Aragallis alternifolia, Car.

Stat. Chili in the vicinity of
Valparaiso; the ordinary form, and
one scarcely distinguishable from the
var. densifolia, Hook. f. Fl. Antares,
2, p. 337 (Lysimachia repens, D'Uss.)
which was collected at Orange Harbour,
Tregia.



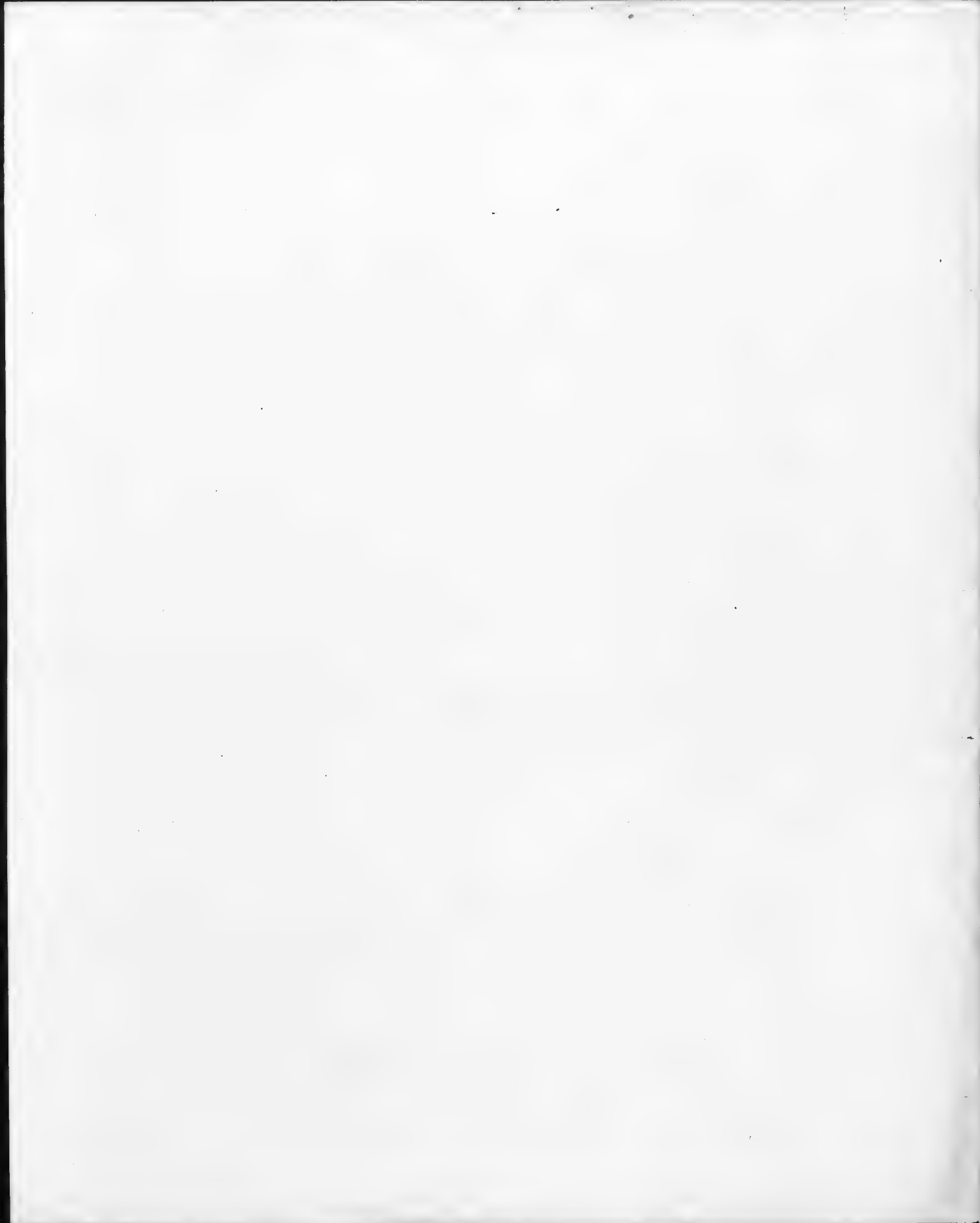
11
4. Samolus, Lin.

1. Samolus Nalerandi, Lin.

Stat. Madeira. Rio Negro, N. Pota-
goria: ^{apparently the European plant form,} Chili near Valparaiso; and Peru at
Callao; ~~The American forms are all es-~~
~~entially~~ the ^{Americanus} var. ~~floribundus~~ (S. floribun-
des. W. & A.), as is the North American plant.

2. Samolus littoralis, R. Br.

Stat. Bay of Island, New Zealand.
Sydney, &c. New South Wales.





Ord. Borraginaceae.

1. Echium, Tournef.

1. Echium candicans, Lin. f.

2. Echium fastuosum, Jacq.

3. Echium plantagineum, Lin.

Hab. Madeira, on the coast at Funchal, &c.

2. Lobostemon, Lehm.

1. Lobostemon lavigatus, Buck.

2. Lobostemon fruticosus, var. Bergianus ^{DC.}

3. Lobostemon argenteus, Buck

Hab. Cape of Good Hope in the vicinity of Cape Town.

3. Archusa, Linnaeus.

1. Archusa Italica, Retz,

Ital. Madeira, in the neighborhood of Funchal.

4. Myosotis, Linnaeus.

1. Myosotis capitata, Hook. f.

Myosotis capitata, Hook. f. Fl. Antarctic.
1, p. 56, t. 37, & Fl. N. Zeal. 2, p. 200.

Ital. Lord Auckland Islands.

5. Eritrichium, Schrad.

1. Eritrichium lineifolium, Wedd.

Anchusa lineifolia, Lehm. Asperif. no.
158.

A. oppositifolia, St. B. K. Nov. Gen. &
Sp. 3, p. 91, t. 200.

Antiphytum lineifolium & A. Wal-
persii (Anchusa Kunthii, Walp.
Rel. Meyer, p. 372), Dc. Prodr. 10,
p. 121, 122.

Eritrichium lineifolium & E. Walpersii,
Wedd. Chlov. And. 2, p. 89, 90.

Stat. Andes of Peru above Baños;
a slender-leaved form, the same as no.
5309 of Spruce's collection in the Andes
further north, and apparently also Meyer's
plant from farther south. - Antiphytum
heliotropioides, A. Dc. ~~Dr. Torrey~~ was ~~shown~~ also
referred to Eritrichium.

6. Cynoglossum, Tourn.

1. Cynoglossum latifolium, R. Br.

2. Cynoglossum australe, R. Br.

3. Cynoglossum suaveolens, R. Br.

Hab. New South Wales, in the vicinity of Sydney, &c.

In the specimen of C. latifolium, which is just beginning to flower, the leaves are all distinctly petioled, and mucronate or cuspitate,

rather than acuminate. ~~The~~ It is well characterized in the Flora of Tasmania. The specimens of the last two species

~~are~~ ~~are~~ accord with Brown's diagnoses and with Dr. Hooker's notes in the appendix to the Flora Tasmaniae, 2, p. 369.

7. Pectocarya, Sl.

1. Pectocarya lateriflora, Sl.

Hab. Peru, in the environs of
Araucillo. A genus of one Chilean,
one Peruvian and a Californian
species.

8. Schleidenia, Endl.

1. Schleidenia

8. Heliotropium, Journ.

1. Heliotropium curassavicum, Lin.

Hab. Rio Negro, North Patagonia. ~~Near~~ Lima, Peru. Coast of the Sandwich Islands. Now found upon almost all tropical and subtropical coasts; of American origin.

2. Heliotropium europæum, Lin.

Hab. Madeira; approaching the var. oblongifolium.

3. Heliotropium undulatum, Vahl.

Hab. St Jago, Cape de Verde Islands, near the var. ramosissimum, Lehm., a mere state of the species.

4. Heliotropium corymbosum, Ruiz & Pav.
Hab. Peru, ^{on the Amancaes mountain near} ~~in the vicinity of~~ Lima.

5. Heliotropium Peruvianum, Linn.

Hab. Lower Andes of Peru, below Obrajillo; the common Sweet Heliotrope.

6. Heliotropium pilosum, Ruiz & Pav.

Hab. Peru, near Lima, on the Amancaes; the original station of Ruiz and Pavon.

The specimens are much more developed than that figured in the Flora Peruviana, 2, t. 110. They are from "a shrub, two or three feet high; flowers white." Leaves and branchlets both villous ^{or hirsute} with long and spreading, ~~somewhat bristly~~, and partly deciduous hairs, and also caescent with a soft and close pubescence, both kinds

apparently somewhat viscos. The leaves are ovate or elliptical, acute at both ends, ~~contracted~~ tapering into a petiole. Summit of the ^{flowering} branches or common peduncle mostly naked, slender, twice or thrice dichotomous. Spikes slender, ~~abscissate~~, from half an inch to two inches long. Bracts none. Flowers sessile, a line and a half long. Sepals broadly lanceolate, ^{or ovate-lanceolate}, equal or nearly so, villous-pubescent. Tube of the corolla about twice the length of the calyx, minutely pubescent externally, not bearded or pubescent within, the limb plaited. Stamens inserted on the base of the tube of the corolla: filaments very short; anthers elongated-linear, obtuse, the somewhat incurved ~~tips~~ apex minutely bearded, ~~for~~ distinct. Style short ~~but~~ and narrow: stigma ^a disk ~~shaped~~ and surmounted by a

slender, cylindraceous, emarginate, sub-
hemispherical prolongation. Pericarp
separating into 4, minutely and
sparsely hispid pyrene, about the
length of the incurved lobes of the calyx.

7. Steliotropium gracile, R. Br.

Hab. Luzon, near Manilla; - the
St. gracile var. depressum, Cham., referred
by De Boodle to St. coromandelianum,
but it seems distinct.

lum. Lehm.
8. Steliotropium (Schleidenia) polyphyllum -

Hab. Brazil, in the vicinity of Rio
Janeiro.

florum. Lin.
9. Steliotropium (Steliophytum) parviflorum -

Hab. Peru, near Lima. - To
this species, as I suppose, ~~belongs~~ St.

synzostachium of Ruiz and Pavon
may be referred.

10. Steliotropium (Steliophytum) persicariae
folium, Sw.

Sw., Brazil, in the Organ Moun-
tains near Rio Janeiro.

11. Steliotropium (Tiaridium) Indicum, ^{Lin.}

Sw., Rio Janeiro, and elsewhere;
introduced, originally from Asia.

12. Steliotropium anomalous, ^{V. Arn.} Hook.

X. fruticosum, ^{nunc procumbens,} depressum, strigoso-
incanum; foliis confertis linear-
lanceolatis basi attenuatis vel
spathulatis; cymis pedunculatis
glomerifloris; calycis lobis
inequalibus imbricatis, 2 exteri-
oribus ovatis seu oblongis, ceteris
linearibus; corollae tubo extus
strigoso-sericeo calyce bis lon-
giore; antheris apicibus bre-
vissime barbulatis primum
coherentibus; ~~perianis~~ nuc-
lis 4 rarius 5-6 scabris.

Lithospermum incanum, Forst.

Prodr. p. 12; Cham. in Linnaea,
4, p. 446.

Steliotropium ? anomalous, Hook. &
Arn. Bot. Beech. Voy. p. 66.

Pentacarya heliotropioides, DC.
Prodr. 9, p. 559.

Var. *P. argenteum*: pube molli-
ore densiore nitente incan-
um; floribus paullo majori-
bis.

Hab. Blermont-Jonnere, Carls-
prof. ^{Karaka} ~~Karaka~~, and nearly
all the Coral Islands, Also on
Matia of the Society Islands. Var.
P. Coast of Oahu, Sandwich Island,
where it was ^(likewise) ~~also~~ collected by Kunz,
and where Gandichand gathered a
specimen of the ordinary form of
the species.

This is certainly Forsters Litho-
spermum incanum, ~~and is, I doubt~~
~~without doubt a Heliotropium~~ which
specific name having long since
been appropriated for a Peruvian

Heliotropium, that of Storker and
Knott must be adopted. The anomaly
of five nucules to the fruit,
however, which suggested the name
and induced DeBardille to form
a genus for this plant, is so
far from constant that I have
not been able to detect a single
instance in full series of specimens
before me, from nine or ten
localities, although it may be in-
ferred from Dr. Pickering's notes
upon fresh specimens that he
had ~~seen~~ ~~remarked~~ seen 5-nu-
cleate fruits. I have observed
six nucules; but ~~the addition~~ of a
supernumerary carpel is not so
extraordinary. ~~The flowers throughout~~
In all other essential respects the
plant is a Heliotrope. Even the
inequality of the sepals is not
~~altogether~~ unexampled, although here

strongly marked. The cyme, at first nearly capitate is at length considerably evolute, and once or twice bifid, more or less scorpioid, often with numerous flowers expanded at the same time. Bracts none: the exterior sepal ~~largest~~ largest and as it were confluent with the shades, in the manner of a bract; the second sepals similar in shape, but a little smaller; the third and fourth ^{of equal length} linear or linear-lanceolate, but nearly as long as the others; the fifth still smaller and sometimes minute. Corolla 2 or 2 1/2 lines long, plaited, apparently white, hypocrateriform, with ~~a plaited~~ rather ample limb, within entirely glabrous. Stamens inserted below the middle of the tube. Anthers linear-lanceolate, with small incurved tips which are minutely

bearded under a lens, slightly
cohering by these tips over the
stigma. Ovary carinate; style
short, bearing a narrow annu-
lus ^(the true stigma?) above which is ^a the cylindra-
~~portion, or prolongation, of the same diameter as the~~
~~cent of proper stigma, the~~ style, its sum-
mit penicillate.

In the variety from the Sand-
wich Islands, the foliage is strik-
ingly silvery-white, and the flowers
rather larger (the corolla 3 lines long);
no other difference appears.

Without much hesitation we may
reduce to ~~the~~ the genus Heliotro-
pium Nuttall's Euploea as well
as Schleidenia, Endl. (Preslea, Mart.)
and Pentacarya, DC., and, with the
series, associate Fourcrafiia with
this genus rather much more than
with Chretia. But the plant
which, in ~~the~~ Mem. Amer. Acad.
n. ser. 6, p. 403, I had characterized

as Steliotropium Japonicum, so closely resembles and is ~~so related~~ ~~go~~ has such geographical relations with Amman's Arguria that ~~it~~ ^{it} doubtless has a similar drupaceous fruit, with bony, bilocellate pyrene; but the fruit is still unknown. Indeed it is not unlikely to be a variety of the Siberian and Mongolian species with a longer style and a glabrous ovary, these being the only notable ~~diff~~ distinctions.

9. Bol denia, Lin.

1. Bol denia (Fiquilia*) dichotoma, ^{Lehm.}

Ital. Peru, on the desert upland near Yanga.

by small round seeds

10. Tournefortia, Linn.

1. Tournefortia (Mallota) argentea, Linn. X

Stab. ^{Shore of the} Mangro, Sooloo, Freeje, Navigator's, and all the Coral Islands.

2. Tournefortia elegans, Cham.

3. Tournefortia floribunda, HBK.

4. Tournefortia Salzmanni, Db.

5. Tournefortia lanceolata, Friesen.

6. Tournefortia salicifolia, Db.

7. Tournefortia glabra, Spreng.

Stab. Brazil, in the Organ Mountains, and in the vicinity of Rio Janeiro; all common species in that District.

8. Tournefortia virgata, Ruiz & Pav.

Stat. Andes of Peru, near Chacajillo; a fragment only.

9. Tournefortia Wallichii, Bl.

Stat. Singapore: the corollas fallen.

10. Tournefortia sarmentosa, Lam.

Stat. Luzon, in the vicinity of Manila.

11. Chretia, Linna.

1. Chretia brevifolia, Roxb.

Stat. Philippine Islands, both Luzon near Manila, and Mindanao, at Bal-dera, Sooloo Islands. The C. heterophylla, Sprag.

12, Cordia, Plum.

1. Cordia glabra, Cham.
2. Cordia grandifolia, A. DC.
3. Cordia obscura, Cham.
4. Cordia cylindristachya, Koen. Sch.
5. Cordia discolor, Cham.

Stat. Brazil, in the Organ Mountains or in the vicinity of Rio Janeiro.

- b. Cordia lantarnoides, Spreng.

Stat. Peru, in the vicinity of Obrajillo. In fruit only.



4 Pav.

7. Cordia rotundifolia, Ruiz

Hab. Peru, near Yanga.
Referred by Alphonse De Candolle to
Narria; but in the specimens,
as in the figure in the Flora Peru-
viana, the calyx opens into persistent
teeth and is not calypstrate, - not
that the character is here of much
consequence.

8. Cordia subcordata, Lam.

Hab. Tahiti, Society Islands,
Coral Islands, Feejee Islands, &c.
Gathered by Gaudichaud and Kery on
the Sandwich Island, ~~where our mate-~~
~~ralists appear not to have met~~
~~with it.~~ (and mentioned by Dr.
Pickering as "planted around the dwellings
of natives; introduced by aboriginal settlers".

9. Cordia aspera, Forst.

C. pube ferruginea hirsuta,
demum glabrescens; foliis mem-
branaceis ovatis acuminatis
asperulis supra glabratis, ser-
ratifis subulatis; floribus par-
vis cymoso-glomeratis; ~~sessilibus~~
calyce ovato-cylindraceo fer-
rugineo-villoso 10-striato, den-
tibus 5 minimis subulatis;
corollae tubo calycem vix su-
perante lobis aestivatione
inflexis et corrugatis longiore;
drupa ovata ^{acuta} munda, putamine
1-2-spermo. X

Cordia aspera, Forst. Prodr. Fl.

Ins. Austr. p. 18.

C. Sprengelii, Schum. in Bonplandia, 1841, p. 258,
vix Spreng.

Hab. Tongatabu, Huve, Sa-
moa, and on some of the Coral
Islands.

A shrub, 10 or 15 feet high,
with a rusty pubescence, which
is soft rather than rough.
Leaves alternate from $3\frac{1}{2}$ to ⁽¹⁰⁾ inches
long, tapering into a slender ac-
umination, serrate with very slender
teeth, long-petioled, the upper
surface soon glabrous excepting
some minute hairiness on the
principal veins. Peduncles an inch
or more in length, once or twice
dichotomous. Flowers sessile, cor-
rad, calyx barely 2 lines long, strong-
ly striate, very ferrugineous-pubes-
cent, the truncate border minutely
5-toothed. Corolla apparently white,
"rugose" from the strong corrugation
of the small oblong lobes in as-
tivation. ^{glabrous.} Stamens and style inclu-
ded. Drupe small, 4 or 5 lines long,
with a rather copious sarcocarp,
and an acute ^(or pointed) bony putamen,

which is angulate, ~~tuberc~~ and
often 1-2-tuberculate or spinose
near the base, by abortion 1-2-
celled.

This is a genuine Cordia, but
not closely related to any other
species with which I am ac-
quainted. The specific name
is unfortunate, as the leaves
are by no means asperous.

General release
to the public

Ord.

Convolvulaceae,

1. Argyria, Lour., Night.

1. Argyria tiliifolia, Night.

Argyria tiliifolia, Night. Le. Pl.

Ind. Or. 4, p. 12. t. 1538; Miq. Fl. Ind.

Rivea tiliifolia, Chris. Conv. Or. p. 25,

* in Stb. Prodr. 9, p. 325.

Itab. Caldera, Mindanao,
Philippine Islands.

2. Lepistemon, Blume.

1. Lepistemon flavesens, Blume.

Stat. Luzon, Philippine Islands,
near Manila.

Our plant, which is ^{probably} the same
as Burnin's no. 1864, from the Philip-
ines, I presume to be Blumes original
species. It differs from the Indian plant
(L. Wallichii, Choisy. ouv. Br. p. 61, t. 2, ~~p.~~
n. 8, L. flavesens, Night, Ec. t. 1362)
barely in two, perhaps in constant par-
ticulars, viz. in the denser inflorescence,
which is almost capitate, and in the ~~less~~
more or less bristly hairiness of the pistil,
which in the Indian plant specimens
examined, and as figured, is glabrous. There
is no essential difference in the scales of
the filaments, which Choisy describes as gla-
brous, while his artist more correctly figures
them otherwise.

23. Batatas, Rumph.

1. Batatas edulis, Chois.

Hab. Sandrich ^(Freeje) Islands, H.
cultivated, and apparently also escaped from cultivation, as it is in Macrae's collection. There is also a specimen in the collection from Rio Janeiro.

2. Batatas pentaphylla, Chois.

Hab. St. Jago, Cape Verde Islands; "in wild situations." Sandwich Islands; along the base of the Kaala Mountains, Oahu, and on W. Maui. Enumerated by Dr. Pickering as if indigenous.

when it was also collected by Macrae.



Batatas acetosifolia, Choisy, was collected by
Kenny on Nihaun, one of the Sandwiche Islands.

4. Ipomoea, Linn.

1. Ipomoea (balonyction) Bona-nox, Linn.

Stab. Feejee, Samoan, and Sand-
wich Islands (Hawaii): the ordinary
form of the species.

2. Ipomoea (balonyction) longiflora, ^{R. Br.}

Ipomoea longiflora, R. Br. Prodr.
p. 484, non ~~M.~~ Willd. & A. B. K.

Balonyction muticum, DeCaisne, Herb.
Timor, p. 62; Choisy, in DC. Prodr.

C. longiflora, ³⁴⁵ Wright, Sem. in Boupl. 1861, p. 258.

C. longiflorum Hassk. Pl. Jav. Rav.
p. 523.

Stab. Gardner's, Disappointment,
Wak's, Kurick, and other Pacific

Coral Islands.

This is probably no more than a variety of the preceding species, with pointless sepals, and mostly shorter peduncles.

3. Sponcea (Pharbitis) insularis, Steud.

Pharbitis insularis, Chois. Conv. Cr.
p. 57, & in DC. Prodr. 9, p. 341.

Convolvulus purpureus, Hook. & Arn.
Bot. Beech. Voy. p. 90, non Linn.

Ital. Hawaii and Oahu, Sand-
which Islands; both the silky-canescient
and the smoother forms. Feejee Islands.
Mr. Wright found it also at the Loo Choo
Islands. Kery gathered at Oahu
what is seemingly the same species
with lobed leaves.

4. Ipomoea (Pharbitis) pubescens, ^{Lam.}

Stat. Peru, in the vicinity of
Obrizillo.

5. Ipomoea asarifolia, Roem. & Schult.

Stat. St. Jago, Cape de Verde
Islands. Apparently includes Chrysip
I. umbica and I. rugosa.

6. Ipomoea Pes-caprae, Sweet.

Stat. St. Jago, Cape de Verde Is-
lands. Tahiti, Feejee Islands.
Noted also from other Pacific islands
and coasts.

7. *Sporaea peltata*, Chois.

^(under) Itab. Tahiti, Society Islands; "the stem sometimes two inches in diameter; flowers white." Savaii, one of the Samoan Islands: "~~flowers~~ corolla white, the margin yellow." Dr. Seemann found it in the Feejee Islands.

8. *Sporaea Turpethum*, R. Br.

Itab. Society and Feejee Islands; with angulate or even somewhat hastate leaves. Samoan and Feejee Islands, and coast of Hawaii, Sandrich Islands, with ample and broadly cordate leaves.

9. *Sporaea codonantha*, Benth.

Sporaea codonantha, Benth. Fl.

Sturtw. no. 675, p. 120, & Bot. Voy

Sulph. p. 135.

Itab. Mbra Bay, Freezie I-
lands; "frequent in open ground and
at a little distance from the coast."

Apparently distinct from the
preceding, in the points indicated
by Mr. Bentham. Whatever it
may prove to be the specimen
wholly agrees with Hartweg's
plant from Guayaquil. Perhaps
it is Brown's I. alata.

10. Spongia Pes-tigridis, Linna.

Itab. Near Baños, Luzon, Philip-
pine Islands. A common Indian
species.

11. Spongia limifolia, Blume.

Itab. Caldera, Mindanao, Phil-
ippine Islands. A mere fragment.

12, *Ipomoea crotonifolia*, Gardn.

Ipomoea crotonifolia, Gardn. in Hook.
Lond. Jour. Bot. 1, p. 180.

Stat. Brazil, in the vicinity of Rio
Janeiro.

This well-named species does not accord with the character of Choisy's *I. viridis*, to which it is doubtfully referred in the Prodomus. The peduncles are for the most part many-flowered, and the ferrugineous tomentum nearly uniform on both sides of the scarcely cordate leaves.

Ipomoea dichotoma, Choisy?

Stat. Brazil, in the vicinity of Rio Janeiro; a dubious fragment.

1- Iponoea Coptica, Roth.

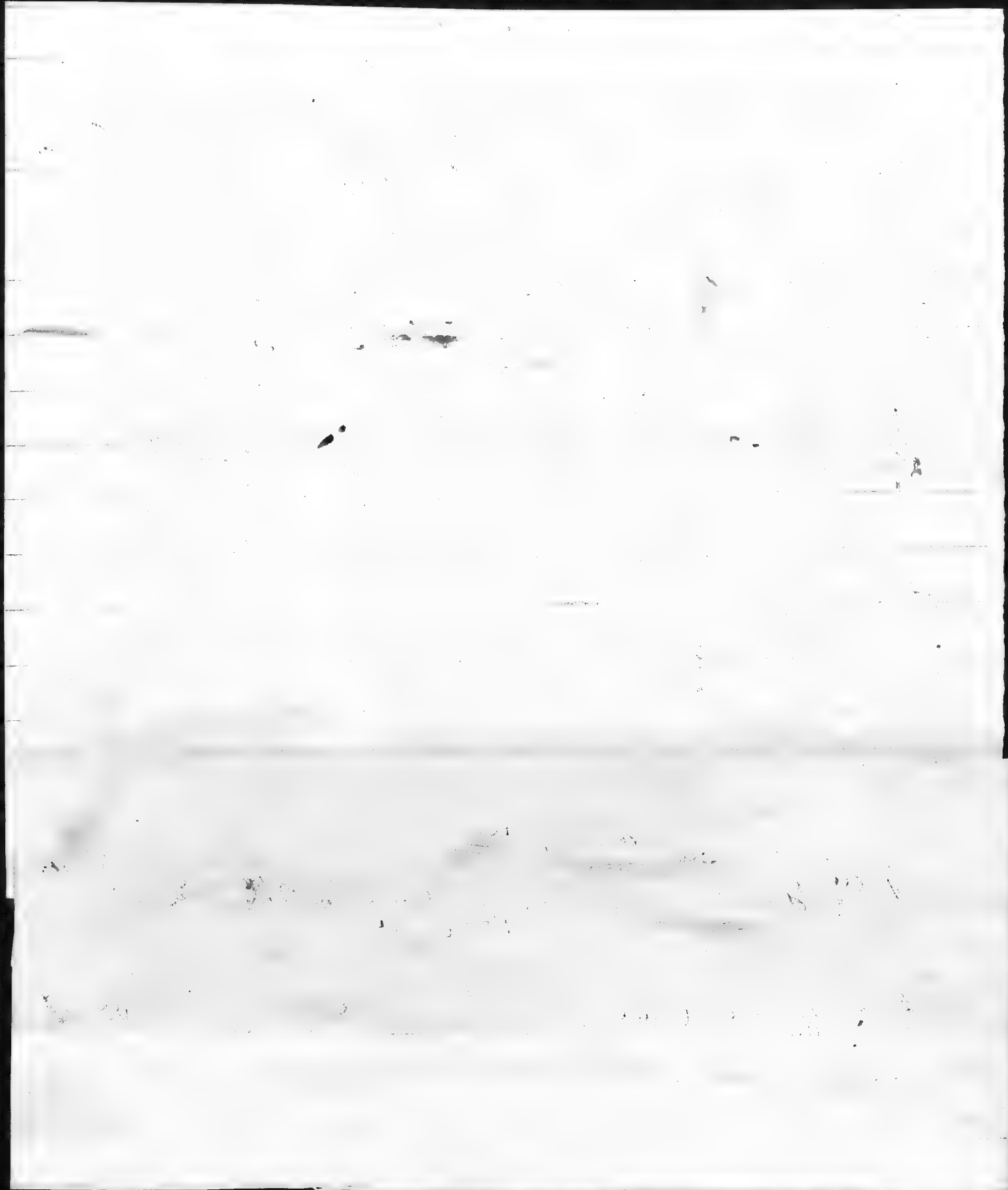
Stat. St. Jago, Cape de Verde Islands.

15- Iponoea tuberculata, Roem. & Sch.

Stat. Hawaii, Kani, H. Sand-
wich Islands.

Stoker and Arnott, in Bot. Beech,
Voy., enumerate both Convolvulus tuberculatus and C. Cairicus from the
Sandwich Islands. We have only one
species, and no ripe fruit for determining

whether the seeds are "silky-to-
mentose" or "glabrous". Probably
~~both~~ the two are not distinct,
as Bentham suggests.



16. Ipomoea pendula, R. Br.

Hab. Wollongong, New South Wales;
except in the deeper color of the flowers;
This, again, ¹ seems hardly different
from the preceding, so far as can
be told from dried specimens.

17. Ipomoea fastigiata, Sweet.

Hab. Feejee Islands; a specimen
in fruit only, but apparently of this
tropical American species, which has
found its way to India and Polynesia.

18. Ipomoea gemella, Kth.

Hab. Luzon, Philippine Islands, in the
vicinity of Manila.

17. Ipomoea Forsteri.

Y. volubilis, mox glabrata; foliis
cordato-sagittatis mucronatis longe
petiolatis; pedunculis 1-3-floris;
pedicellis tetraquetris petiolum
subaequantibus; sepalis ovalibus
obtusis mucronatis vel aristu-
latis; corolla rosea ~~vel purpurea~~
~~rea~~ sesquipollicari; capsula et
seminibus glabris.

Ipomoea carnea, Forst. Prodr.

Fl. Ins. Austr. p. 15, non

Jacq.

Y. obscura, Guillem. Zeph. Tait.

p. 44, vix Koen. & Schult.

Y. sepiana, Seem. in Bonpl. 1861, p. 258, vix
Koenig.

Var. β . Itanaiensis; foliis elongato-
sagittatis acuminatis, lobis parallelis
approximatis; pedunculis elongatis

3-7- floris; corolla "alba" prol-
licari.

Hab. Tahiti and Metia, Society
Islands, Tongatabu, Feejee Islands.
Var. β . Itilo, Hawaii, Sandwich
Islands.

(Young) ^{shoots and leaves} ~~parts~~ more or less his-
sute-pubescent; but the hairs mostly
soon deciduous. Leaves $1\frac{1}{2}$ to $2\frac{1}{2}$ inches
long, varying from roundish-cordate
with a deep acute sinus to deltoid-
sagittate, either blunt, acute, or cus-
pidately acuminate, the basal lobes
either rounded or with a short diver-
gent acumination; petiole slender, ~~from~~
~~an~~ an inch or an inch and a half
long. Peduncle ^{proper} shorter than the
petiole, but the pedicels often
equalling them. Sepals fully 3
lines long, of a chartaceous texture

Sernia obscura, Jacq. ?

Sernia carnea, Fent. Ind. p. 15,

non Jacq. Sernia, Grilleau, Zsch. Tit.

p. 44, an Sernia, A. Schult. ?

in the dried specimens, broadly oval,
very obtuse, tipped with a slender
mucro or cusp. — This can be ~~black~~
^{black, very smooth. — This can hardly}
^{I cannot, with Villenot, refer}
~~be referred to~~ *J. obscura*. But if
J. reptans ever grows in rather dry
soil, ascends, and becomes voluble,
~~this~~ it may include these forms,
and especially the var. *Hawaiensis*.
In the latter the leaves are
very much like the narrower
ones of *J. reptans* (commonly 3 inches
long and 6 to 12 lines wide, tapering
to a point), oblong- or lanceolate-sagittate), but the basal lobes are nar-
rower and not at all diverging, but
rather ~~convergent~~ approximate or con-
nivent. Its peduncle attains the
length of three inches, and bears
an umbel of from 3 to 7 flowers.
The campanulate-funneliform
corolla is shorter than in *J. reptans*.

and is noted by Dr. Pickering as
"white"; but the dried specimens
show a tint of rose.

70. Ipomoea reptans. Poir.

Hab. Mangri, Feejee, and Sa-
moan Islands, on the coast.

5. Jacquemontia, Chois.

1. Jacquemontia sandwicensis,

J. villosa-pubescentis, nunc glabrata,
caulibus e radice tuberosa
procumbentibus; foliis carnosu-
lis obovatis cuneato-oblongisve
emarginatis vel obcordatis mox
glabris breviter petiolatis; pe-
diculis folium aequantibus 1-3-
floris; sepalis 3 exterioribus ovatis
obtusis herbaceis ^(multo minoribus) 2 interioribus
oblongo-lanceolatis acumina-
tis; corolla calyce duplo longi-
ore.

Convolvulus ovalifolius, Hook.

J. Arn. Bot. Beech. Voy. p. 90,
nunc Vahl.

Sponsea ovalifolia, Chois. Conv.

Gr. p. 67, & in Ob. Prodr. 9, p. 357,
quoad pl. Sandw. & varr. pubes-
ens & tomentosa.

Hab. Sandwich Islands; on the
leeward portion of Oahu, Maui,
and other islands. Oahu, Menres,
Macrae, Nuttall, Sandichand. Ka=
moolame, Kemy.

The root, as Dr. Pickering was
informed, is tuberos and edible.
Stems slender, slightly if at all
ligneous at the base, prostrate
or decumbent, one or two feet long,
either sparingly or densely villous-
pubescent when young, often
glabrate with age. Leaves an inch
or less in length, moderately or deep-
ly notched at the apex, often obcor-
date, mostly acute at the base, gla-
brate with age; petiole 2 to 5 lines

long, Peduncle up to the bract-
lets equalling or rather shorter
than the leaf; the bracts small,
lanceolate, or sometimes larger
and resembling the leaves on a
small scale; ~~pedicel~~ one-flow-
ered, or umbellately 2-3-flowered;
the pedicels mostly shorter than the
peduncle. Flowers small. Calyx
3 lines long; the three broad outer
sepals lax and somewhat ampliate
after flowering, broadly ovate or
oval; the two inner slightly shorter
but very much narrower, acumi-
nate, more scarious. Corolla
campanulate, apparently white,
4 or 5 lines long, glabrous. Stig-
mas elongated-oblong, flattish.
Capsule small, globose, 2-celled,
4-seeded, dehiscent.

It would have been remarkable if this were
~~identical~~ the same as the East Indian and West
African species with which it was confounded. I have
not seen the latter plant, but ours does not accord with the
character of it, and it has the stigma of *Lacynum*.

2. Jaquemontia Martii, Choisy?

Stat. Brazil, near Rio Janeiro,
"Flowers blue."

This, which is probably a common species at Rio, does not wholly accord with ~~any~~ the characters of any one of Choisy's species. It is one of those with perfectly smooth sepals, of a chartaceous texture in the dried state; and these in the present plant are intermediate in shape ~~between~~ between those of J. Martii and J. Blanchetii, var. major. The genus species need revision. The plant figured as J. Canescens in the Botanical Register, with very obtuse, equal, and smooth sepals, cannot be Humboldt's species; it is probably Choisy's J. velutina.

6. Convolvulus, Lin.

1. Convolvulus erubescens, Sims.

Stat. Hunter's River, New South Wales. — To this perhaps the next, with various synonyms, may be referred.

2. Convolvulus Bonariensis, Car.

Stat. Chili, in the vicinity of Valparaiso.

3. Convolvulus Hernandezii, L'Hér.

Stat. Callao, Peru. — A variable species, diffused from Texas to Chili and Buenos Ayres, &c.

C. arvensis, Lin., was picked up in Madeira.



7. Aniseia, Chois.

1. Aniseia uniflora, Chois.

Hab. "Tongatabu," ~~A single~~
~~fruiting specimen~~ according to the
ticket, but it evidently the plant
noted by Dr. Pickering (Distrib. p. 359)
as from "Nalua, Feejee Island".

It is a wide-spread "Afr-Indian"
species, and was collected at the Feejies
by Prof. Harvey, and by Dr. Seemann.

8. Calystegia, K. Br.

1. Calystegia Soldanella, K. Br.

Hab. New Zealand, at the Bay of
Islands. Moolongong, New South
Wales.

2. Calystegia sepium, N. Br.
Stab. Bay of Islands, New Zealand.

4. Stewittia, Night.

1. Stewittia bicolor, Night.

Stewittia bicolor, Night in Madr.

Jour. 1837, & Le. Ind. Or. 3, t. 835.

Shuteria bicolor, Chois. Conn. Or.
p. 103, & Ob. Prodr. 9, p. 435.

Stab. Luzon, Philippine Islands,
near Manila.

10. Bonamia, Pet. - Thours.

1. Bonamia Menziesii, Sp. Av.

B. caule lignoso decumbente;
ramis volubilibus, junioribus
herbaceis cum foliis ellipticis
utrinque obtusis vel retusis
(supra max glabris) aurato-
tomentulosis; pedunculis axillari-
bus unifloris recurvis, fructifer-
is deflexis; sepalis rotundatis
coriaceis sericeis; stylis basi con-
natis; capsula ovoidea coriacea
^{evalvi}
~~ex~~ dehiscente valvata; semini-
bus baccatis.

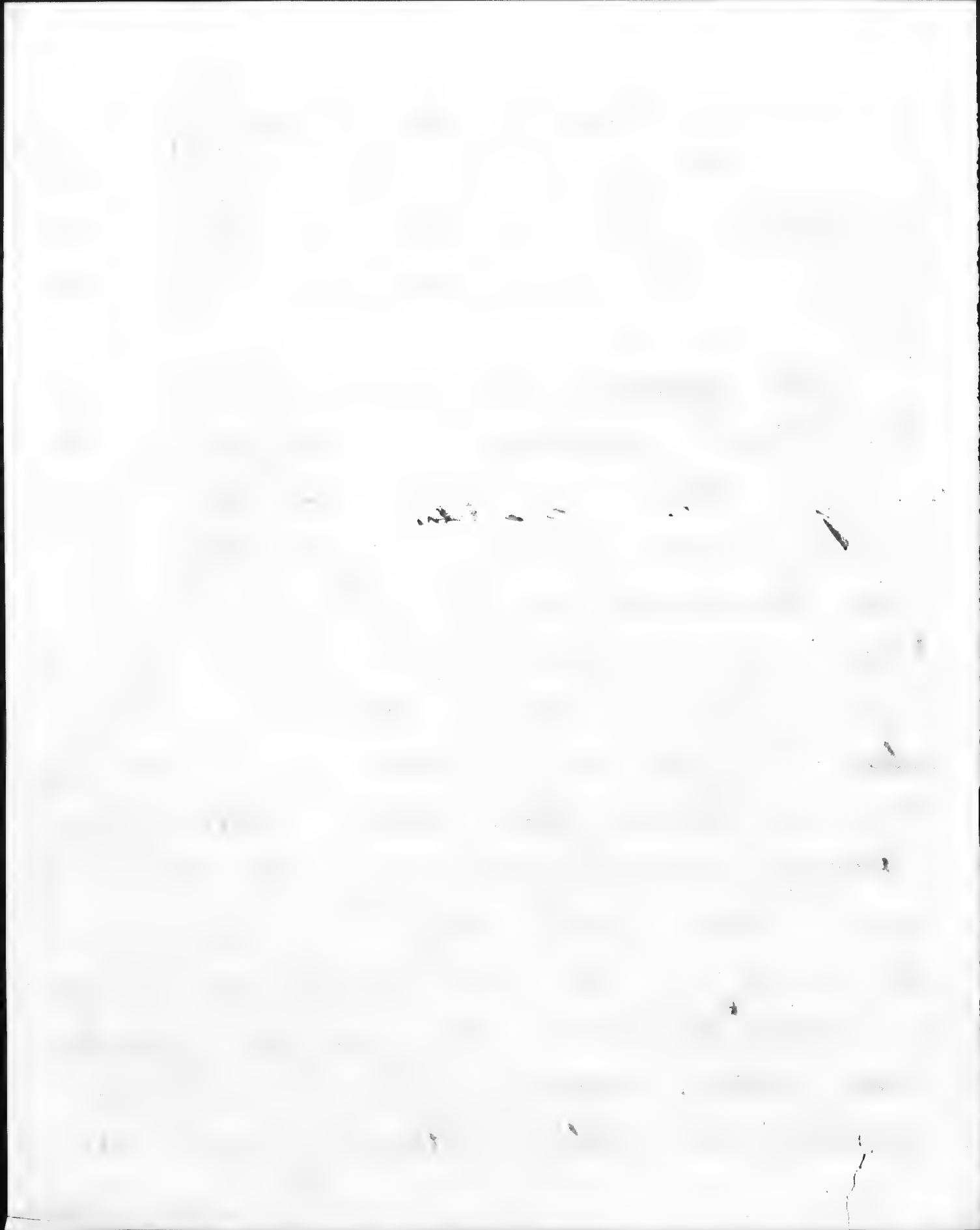
Var. β . foliis oblongis seu ovato-
lanceolatis acutis vel acumin-
ulatis.

Convolvulus ovalifolius, var. ? Hark. & Arn. Bot.
Beck. Voy. p. 90.

~~Apocynum ovalifolium~~ var. tomentosa, Chrys. in Ab. Pet.
9, p. 307.

Stat. Sandrich Island (where
it was discovered by Menzies); on the
southern base of the Kaala Moun-
tains. Var. β . Mani, Kerney, no.
420.

This ~~plant~~, which I presume to be
the plant mentioned by Storker and Br-
unt from the collection of Menzies, occurs
in the present collection with abundant
ripe fruit and a few flower-buds.
A form of it with acute leaves supplied
to me from Kerney's collection has
~~also~~ dropped the corollas from the later
flowers, but a few retain their styles.
According to Dr. Pickering the decidedly
woody base of the stem is tortuous and
decumbent; the branchlets are slender
and ~~twining~~ ^{twining}. All the younger parts
are clothed with a fine and close,
yellowish, silky tomentum. Leaves



Vestiges of the dissepiment, which is wanting in the centre, dry and coriaceous or cartilaginous, apparently not dehiscient by valves, but bursting irregularly under pressure. Seeds 4 or 2, with a baccate-fleshy, arillus-like, ^{purple or crimson} epispERM, covering a hard seed-coat. Embryo 4. as in Ipomoea.

If Mr. Brown (in Prodr. p. 487) has rightly stated the difference between Borania of Thomas and his Breweria the two genera cannot properly be maintained; and the older genus of Thomas ~~may~~ must include Stylisma, Raf. as well as Breweria. Traces of the fleshy epispERM, which is so striking in B. Menziesii, are manifest in B. Roxburghii and in B. (Stylisma) humistrata.

crowded,
1½ to 2½ inches long, 9 to 16 lines
wide, becoming glabrate above,
somewhat coriaceous, indistinctly
veiny, entire; petiole 4 to 9 lines
long. Peduncles axillary, about the
length of the petioles, or in fruit longer,
articulated near the base, one-flow-
ered. Sepals nearly equal,
ovate-obtuse, obtuse, about 4 lines
long, little ampliate in fruit.
Corolla externally silky, ~~pubescent~~
externally, campanulate and barely
twice the length of the calyx.
Stamens included. Ovary 2-celled;
the cells each with two ovules.
Styles 2, separate almost to the
base, slenderly filiform, about 8
lines long, each surmounted with
a capitate stigma. Capsule fully
half an inch long, ovoid, glabrous,
~~coriaceous~~, cuspidate with the united
bases of the style, one-celled, having

11. Cressa, Linna.

1. Cressa Bretica, Linna.

Hab. Rio Negro, North Patagonia.
Peru, at Callao. Oahu, Sandwich
Islands, - where Dr. Pickering regards it as
an introduced plant. ~~All the spec~~ All
belong to the var. Truxillensis (C. Trux-
illensis, HBK.), which likewise abounds
on the coast of the southern part of Cali-
fornia, and of the Gulf of Mexico.

12. Evolvulus, Linna.

1. Evolvulus latifolius, Ker.

2. Evolvulus nummularius, Linna.

Hab. Brazil, in the vicinity of
Rio Janeiro.

3. Evolvulus villosus, Ruiz & Pav.

Hab. Peru, around Callao.

4. Evolvulus alsinoides, Linn.

Hab. Cape de Verde Islands. Muthu-
ata, Feejee Islands. - A widely disper-
sed species, which includes E. lini-
folius, Linn., and several others of
the books.

12. Dichondra, Forst.

1. Dichondra repens, Forst.

Hab. Brazil, in the Organ
Mountains, and Peru below Obrajil-
lo; - the var. sericea. Chili at
Valparaiso, New Zealand, New South

Wales at Sydney, and on Hunter's River, the latter the var. sericea.

2. Dichondra argentea, Willd.

Ital. Peru, near Obajillo. — Accords with Mexican specimens, gathered by Coulter, Gugg, &c.; but the pubescence not so close-pressed and silvery as in Wright's no. 507 from N. Texas.

14. Buscuta, Tourm.

1. Buscuta racemosa, Mart. var. ^{Engelm.} Brasiliana,
x

Buscuta racemosa, Mart. Itin. 1. p. 285;

Chris. Buscut. p. 181, t. 3, f. 1, & in
Ob. Prodr. 9, p. 456.

B. racemosa, var. Brasiliana, Engelm.

Sp. Buscut. in Trans. Acad. Sci.

H. Loris, 1, p. 505.

Stat. Brazil, near Rio Janeiro;
with flowers scarcely developed.

2. Buscuta Chilensis. Ker.

Buscuta Chilensis, Ker. Bot. Mag. t. 603;
Chois. l. c.; Engelm. l. c. p. 468.

Stat. Chili, in the vicinity of
Valparaiso.

3. Buscuta corymbosa, Ruiz & Pav. var.
grandiflora, Engelm.

Buscuta Popayanensis, H. B. K. Nov.
Gen. Sp. 3, p. 123; Chois. l. c.
B. cymosa, Willd. Rel. in Roem. &
Schult. Syst. 6, p. 205.

C. conglobosa (Ruiz & Pav. Fl. Per.
1, p. 69, t. 105), var. grandiflora,
Engelm. Sp. Buscut. l. c. p. 483.

Stat. Peru (where it was collected
by Donkey, &c.) in the environs of
Obrajillo.

4. Buscuta Sandwichiana, Chois.

Buscuta Sandwichiana, Chois. Bus-
cut. p. 184, t. 5, f. 4; Engelm. l. c.
p. 497.

Stat. Oahu and Maui, Sand-
wich Islands, near the coast. - A
well-marked species, entirely destitute
of ~~staminal~~ scales.

Ord. Polemoniaceae.

The only plants of this order found in the collection are Collomia ^{and Ceanothus buxifolia, Lam., both} gracilis, Dcgl., from Baños, in the Andes of Peru.

Ord. Hydrophyllaceae.

1. Nama, Linn.

1. Nama Sandericensis, Sp. Av.

N. diffusoramosissima, ^(minutula) pube molli cinerea; foliis spatulatis deorsum attenuatis subsessilibus marginibus revolutis; pedunculis terminalibus demumque lateralibus solitariis vel bifurcatis calyce fructifero

longioribus patentibus; sepalis
corolla campanulata subdimi-
dio brevioribus capsula ovali
paucis longioribus.

Hab. Sandwich Islands; on the
Sandhills of the low isthmus of
Maui. Also collected by Macrae,
Nuttall, and Kuny on Oahu, and
by Nuttall on Maui.

Root annual, as in most if
not all of the genus, ^{the base of the stem} but sometimes
becoming lignescant and appearing
as if perennial. Stem branching
from near the base, and becoming
very diffuse, the branchlets divergent.
Leaves 4 to 6 lines long including the
~~base~~ attenuated base, scarcely veined,
clothed (as ^{are} the calyx branches, &c.)
with a soft and short but some-
what hispid, ~~sub~~ more or less

hoary pubescence. Flowers small. Sepals linear, ~~moderately~~ ^{slightly} dilated at the summit, at least in front, when they become $2\frac{1}{2}$ lines long. Corolla "delicate purple", 2 to $2\frac{1}{2}$ lines long. Capsule 2 lines long. Peduncles becoming lateral by ~~axial~~ ^{terminal} growth, seldom axillary, about 3 lines long when fully developed, either single or ^{more} commonly geminate, the ^{marked} peduncle forking from near ~~the~~ its base. Seeds oval, minutely scrobiculate, as in the genus.

This species most resembles N. dichotoma; but the ramification, peduncles, &c. are quite different. A revision of the species known to me is given in

2. Wigandia, HBK.

1. Wigandia uvens. HBK.? Chois.

Hab. Peru, from near Lima to the Andes.

3. Phacelia, Russ.

1. Phacelia circinata, Jacq.

Hab. Chili and Peru, from the coast to the ^{high} Andes; in latitude ranging from Oregon to ~~Arac-~~
~~cania~~ the Straits of Magellan.

Hydrolea spinosa, Linn. was of course met with at various stations; a fragment preserved in the collection bears no record of the locality.

Estelle Hayden, Cambridge



Small box

Small box

1
Ord. Apocynaceae.

The following well-known species, not requiring any remarks, need only be enumerated: -

Carissa spinarum, Linn. from Luzon near Manilla.

Carissa grandiflora, a native of Port Natal, gathered in Baron Ludwig's garden at Cape Town.

Hunteria? coriacea, of Wallich's catalogue, foliage only, from Singapore.

Malouetia Jamaquarina, A. DC., from the vicinity of Rio Janeiro, Brazil.

Thysanthus embelioides, A. DC., from Rio Janeiro.

~~Lycia straminea, R. Br., Sydney, &c. New South Wales.~~

Forsteronia multinervia, A. DC., from the vicinity of Rio Janeiro.

Dipladenia atrovirens, A. DC., from the same district.

Echites microphylla, Stadelm. (*E. formis*, Vell. ?); *E. peltata*, Vell.; and *E. lasiocarpa*, var. *angustifolia*, Stadelm.; all from Brazil, in the neighborhood of Rio Janeiro.

The singular *Lepineia Taitensis*, of Decaisne, from the mountains of Tahiti, was not met with by our naturalists.

1. Alyxia, Banks, R. Br.

Brown superseded the earlier-published name of *Gynopogon*, Forster, because the character was not good, and the name a false one, few of the species having a truly bearded stigma. It might be said that the name *Alyxia* is equally objectionable, the moniform fruit being less common than the simple drupe.

1. Alyxia stellata, Roem. & Schult.

Synapogon stellatum, Forst. Char.

Gen. n. 36, t. 18, & Prodr. p. 19;

Labill. Ser. Austr. Caled. t. 34.

Alyxia stellata, Roem. & Schult. Syst.

4, p. 439; Gmelin, Zeph. Tail. p.

47 (cum descr. Forst.); Blume, Bijdr.

p. 1031; A. Benn. in Bot. Mag. 1834.

n. 3313; A. DC. Prodr. 8, p. 346.

(and Manna, Friendly Islands, ^{Islands} ~~Sapiruan~~)

Hab. Tongatabu ~~Manna~~ ~~Tongatabu~~

~~got or~~ ~~Islands~~ ^{Ovolan, Muthu-}

^{mountains of Fakili?} ~~at a, H. Feejee Islands.~~ ~~Cimeo,~~

~~Society Islands.~~

The leaves vary from elliptical to broadly oval on the one hand and to lanceolate on the other, and from one to $2\frac{1}{2}$ inches in length; they are always subsessile or very short-petioled. Calyx and short pedicels ciliate. Tube of the corolla only $1\frac{1}{2}$ or 2 lines long. Ovaries glabrous, but surrounded by a villous ring. The pilose stigma at first globular, becoming oblong with age. Drupe short-oval, 4 or 5 lines long, the stipe more than twice the length of the calyx.

Schult.

2. Alyxia scandens, Rœm. &)Gynopogon scandens, Hort. Prodr.
l.c.; Spreng. Pug. Pl. 1, p. 24Alyxia scandens, Rœm. Schult. l.c.;
Millen, l.c. (cum descr. Hort.);
A. D. C. l.c. p. 348.Hab. Mountains of Tahiti, Society
Islands. In fruit.Hab. Mountains of Tahiti and
Eimeo, Society Islands. ~~Fruct.~~

Leaves larger than in the last
and distinctly petioled. Pedicels
and calyx characterate, either glabrous
or pubescent. Flowers sometimes to-
mentose and much like those of
A. stellata, commonly pentamerous,
and with a larger corolla. Ovaries
either silky-pubescent, or surrounded
by a ring of silky hairs. Drupes
short-ovoid half an inch in dia-
meter, the style not twice the
length of the calyx. Albumen
not longitudinally pulcate.

Rich. in herb.

3. Alyxia bracteolosa, Sp. Nov.

A. subscandens, glaberrima; foliis
~~oppositis~~ ^{vel} plerumque ternis
oblongis ^{vel} sublancculatis ~~et~~ nunc
obtusis nunc acumine obtuso
apiculatis caudatisve basi acu-
tis ^{vel rotundatis} supra nitidis crebre trans-
versim lineatis sublonge petiol-
atis; cymis axillaribus pluri-
floris brevissime pedunculatis
petiolum vix superantibus;
pedicellis brevibus arcte imbri-
cato-bracteolatis; bracteis ovato-
triangularibus dorso carinatis
intus concavis ciliolatis sepalis
consimilibus; corolla lutea lon-
gius tubulosa; stigmatibus imbricatis;
ovariis glaberrimis; drupis sub-
globois breviter stipitatis.

100

1

1

100

Var. β . macrocarpa: fructu oliva
formi ^{maximo} sesqui pollicari 2-3-
spermo? (e drupellis 2-3 confla-
tis).

Alyxia macrocarpa, Rich in
 herb.

Alte scandens;

Var. γ . angustifolia: foliis mi-
noribus angustioribus etiam
sublinearibus.

Alyxia stellata, Swm. in Burpl. 1861, p. 257.

Var. δ . parvifolia: foliis minori-
bus ellipticis (sesqui- bi polli-
caribus); pedimentis pauciflo-
ris ^{nunc elongatis,} fructiferis petiolis ^{longiori} bis
superantibus.

Stat. Tutuila, Manua, Is. Navi-
gators' Islands. Tongatabu, Ovahu,
Feejee Islands. Var. β . Feejee
Islands in fruit. Var. γ . Tongatabu
and Feejee Islands in fruit. Var. γ .
Muthuata, Feejee Islands.

gustioribus, ~~nunc~~ lineari-oblan-
ceolatis; praetibus minoribus.

Itab. Tulavila, Manua, ~~Is.~~
Is., Samoa Islands, Tongatabu.
Ovohu, Fiejee Islands. Var. B.
Tongatabu.

This is said to be more or less
scandent. It is glabrous through-
out, excepting the ciliation of the
bractlets and ~~divisions of the~~
~~sepal~~^{calyx} ~~calyx~~. The leaves are commonly
in threes, occasionally in fours, or
~~on some~~^{times} ~~branches~~ merely opposite.
In texture and venation they
resemble those of A. scandens; but
they are usually larger, from 2
to five inches in length, and 12
to 18 lines wide, most commonly
elongated-oblong, with ^{(rarely} an acute or
sometimes ^{oblique or rounded} ~~tapering~~ base, and a
rounded, obtusely short-pointed, or
^{else} ~~sometimes~~ more conspicuously acu-

minate, but blunt apex; petiole
 usually half an inch long. The
 flowers are in small ^{axillary} ~~terminal~~ and
 very short-peduncled, ~~or~~ contracted
 cymes. The peduncles are naked;
 but their divisions and the short
 pedicels (2 to 4 lines long) are com-
 pletely imbricated with pairs of
 small and thickish, triangular-
 ovate and obtuse, appressed bract-
 lets, which are strongly carinate
 on the back. The exterior sepals
 resemble these bractlets; the inner
 ones are thinner and less carinate.
 Corolla "dirty yellow"; the slender
 tube half an inch long, en-
 larged at the throat (but less so
 than in *Gandichand's* figure of
A. laurina), and constricted at
 the orifice; the lobes ovate, acu-
 light, a line and a half long.
 Stamens inserted in the throat;
 anthers cordate-lanceolate.
 Style filiform, long and slender;
 stigma rather small, capitate,
 beardless. Ovaries glabrous; the

very short disk on which they
rest also perfectly glabrous, or
with a few small hairs. Drupes
simple, very rarely moniliform-
geminate, ^{toroid or} globose, half an
inch or more in diameter; ^{when dry somewhat ribbed, angled longitudinally} the stipe
only about a line long, or rarely longer.
Albumen, &c. as in the genus.

The variety macrocarpa, of ~~which~~
which there is only a fruiting
specimen, is remarkable for its
large, turgid, olive-shaped but some-
what curved fruit, fully an inch
and a half long and two thirds
of an inch broad in the dried state,
as app., instead of a two-pointed or
three-pointed fruit, ~~thus~~ as many
fertile portions had run together.
The foliage and bractlets accord
with the ordinary form of the
species. -- The variety angustifolia
has rather smaller fruits than
the typical form, as well as
narrower leaves; the latter 2 or 2½
inches long and 5 to 8 lines wide.
It is said to climb tall trees. --

The variety pavifolia is an extreme form, smaller in all its parts, with elliptical leaves, the fruiting pedicels ^{uncles} ~~pedicels~~ half an inch or an inch long, and apparently few-flowered.

This species is so widely diffused throughout the South Sea Islands that it must have been met with before. It may have been confounded with A. scandens or with Sandichand's A. laurina. The bracteolated pedicels at once distinguish it from the former, and also from the latter, in which, however, the calyx is bracteolate and the pedicels ~~very short~~ hardly any. Judging from Sandichand's plate (for I have not seen the species) the ^{primary} sessile leaves, terminal and few-flowered peduncles, the smaller corolla more inflated at the summit of the tube, and the pubescent ovaries, all indicate a species very distinct from the present, remarkable one.

4. Alyxia oliviformis, Gand.

A. Scandens, glaberrima; foliis
oppositis variusve ^{tenui-coniugatis} terminatis,
ovalibus, ^{vel} oblongis basi rotunda-
tis quandoque obovatis basi
attenuatis breiter petiolatis;
pedunculis axillaribus 3-5-floris
folio dimidio breviribus; pedicellis
nudis; floribus, ^(an semper?) tetrameris; Cor-
olla tubo clavato calyce trip-
lo longioribus; ovariis glaber-
rimis; stilo fere intra stig-
mate fere inherenti; drupis
olivæformibus; stipite calycem
bis terre superante; albumine
longitudinaliter leviter sulcato.

Alyxia oliviformis, Gand.

Mt. Voy. Freyc., p. 451; Walp.
Kel. Meyen., p. 361; A. DC. l.c.

A. sulcata, Hook. & Arn. Bot. Beech.
Voy., p. 90; DC. l.c.

Var. *β. myrsinifolia*: foliis rigidioribus parvis ellipticis anguste oblongis linearis-ellipticis seu lanceolatis; floribus pentameris; drupis minoribus. Pedicellis pubentibus;

Hab. Sandwich Islands: mountains of Oahu; found by all collectors. Also found on Kauai by Remy. Var. *β.* Sea coast of the District of Wai-nap; and mountains near Honolulu.

This is both Gandichand's *A. olivacea* formis, and Hooker and Arnott's *A. sulcata*. The surface of the albumen is lightly and regularly grooved lengthwise, as in no other species I have examined, but these grooves appear on the fruit only when the pericarp was thin and shrinks upon the seed in drying, as Endlicher suspected, so that this peculiarity was naturally overlooked by Gandichand. As to the leaves, they are variable enough, smaller and proportionally broader than in *A. scandens*, and less shining above. In some forms, like the flowers, they rather more resemble *A. stellata*. They are both opposite and

ternate upon the same plant, from one to two inches in length, commonly ovate and oblong-ovate with a rounded base and a more or less obtuse apex, or obtusely pointed apex, but not rarely inclined to ovate and narrowed into the short petiole; the latter only $1\frac{1}{2}$ to 2 lines long. Peduncles 3 to 6 lines long, slender, 3-flowered, sometimes 5-flowered; pedicels about 3 lines long, bracteolate. Flowers tetramerous in all the specimens examined. Sepals ovate, oblongish, barely a line long. Corolla yellowish, 3 lines long; the tube clavate; the orifice constricted; lobes ovate obtuse. Ovaries perfectly glabrous and with no pubescence around their base. Stigma capitate and ~~the~~ ^{slightly} tipped with a double, pubescent cusp, which soon disappears. Drupes oval

or ~~oval~~ oblong, from one-third to two-thirds of an inch in length, usually mucronate, raised on a stipe of 2 or 3 lines in length, two often developed, and one or both of them ~~not~~ occasionally double or monili-form. Some specimens gathered by Kemy, K., with smaller and narrower leaves than usual, effect a transition into the

Var. myrtillifolia; a singular form which would be taken for a distinct species. Its leaves vary, on the same specimen, from elliptical and only half an inch in length, to elliptical-linear and an inch long by 3 lines in width. On another specimen they are lanceolate or linear-lanceolate and from $1\frac{1}{2}$ to nearly 2 inches in length. The flowers examined are pentamerous; the drupes from 4 to 6 lines in length and oval. They have the longitudinally sulcate albumen which distinguishes A. oliviformis.

2. Kauwolfia, Plum.

1. Kauwolfia sandwicensis, A. DC.

Hab. Sandwich Islands; on the mountains behind Honolulu, Oahu.

The plant differs slightly from Seemüller's generic character in having a long and filiform style. And the stigma is subtended by an indusiate ring. The ovaries are distinct nearly to the base, each about 4-ovulate. But the ~~obovate~~ drupes are united to the middle, the upper part or lobes divergent. Pericarpeum osseous, very thick. Hypogynous disk thin, saucer-shaped, with the margin entire,

3. Berbera, Linn.

1. Berbera O'Donnell, Gort.

Hab. Tahiti, Society Islands: "a cultivated tree." Tutuila, Samoan Islands.

This must be Foster's and Guillenmin's C. Manghas. It is the only species noticed at Tahiti, and that only as a planted tree. 20 feet high, with large white flowers. At the Samoan Islands the same species grows on the coast, and is noted as perhaps introduced. It is said to bear a large, red, ovoid-compressed fruit. It is noted as fruit with at the Feejee and Tonga Islands also: but the specimens preserved all belong to the next.

2. Berbera lactaria, Hamilton.

Hab. Feejee Islands: common, both along the coast and in the interior. Also Fongatapu, (Collected likewise by Dr. Seemann, no. 309.)

4. Ochrosia, Juss.

1. Ochrosia parviflora, Hensl.

Cerbera parviflora, Forst. Prodr. p. 19,
non Forst.

Ochrosia parviflora, Hensl. Fl. Keel,
in Ann. Nat. Hist. 1, p. 345;
A. DC. Prodr. 8, p. 357, ~~non Hook.~~

O. elliptica, Sem. in Boupl. 1861, p. 257; an Labiata?

Stat. Tongatabu, (Also Vavau,
Harvey.) Bornu-some, Fiji Islands.

In Professor Henslow's account
of this species, I have only to add
that the ovaries are not really
united except at their apices, and
that the ~~six~~ ovules are as many as
eight in the flowers examined, four
on each margin of the suture; they
are antheropous; the micropyle ~~is~~
~~believe~~ superior. ^{is longer & whitish long.} The specimens show
some half-grown fruit, which consists
of a pair of ovoid fleshy or drupaceous
carpels, the larger an inch long.
Ochrosia sandwicensis, A. DC. (O. par-

Cerbera parviflora, Hook. & Arn. (non
 Forst.) appears not to have been
 met with; but there are good spe-
 cimens in Kerm's ~~Hawaii~~ collec-
 tion from Hawaii. The fully-grown
 flower buds are almost an inch in
 length; the narrow lobes rather longer
 than the tube; the latter glabrous
 within. Ovules 3 or 4 in each ovary.
 Seeds peltate, one (attached to
 face of the thin, nearly complete
 false partition, ^{scaberrimus?} the radicle
 inferior!

5. Peschiera, A. DC.

1. Peschiera nystrix, A. DC.

Stat. Orgao Mountains, near Rio Janeiro, Brazil. A variety with the leaves more distinctly petioled than in the figure of Vil-
lori.

6. Taberna montana, Plum.

1. Taberna montana coronaria, R. Br.

Taberna montana coronaria, R. Br. in
Art. Kew. ed. 2. 2. p. 72; Lodd.
Bot. Cab. t. 406; Wight, Lc. Pl.
Ind. Or. t. 477.

Var. B. brachycarpa: fructibus ovatis
oblongisve turgidis glaberrimis;
calyce profundius fisso.

Taberna montana citrifolia, Forst.
Prodr. p. 20, non Lin.; foliis
latis oblongisve.

T. bumingiana, A. DC. Prodr. 8. p.
373; foliis angustioribus ellip-
tico-lanceolatis seu lanceola-
tis.

T. Viliensis, Seem. in Bourpl. 1861, p. 257.

Stat. Tongatabu, Heeze Is-
lands, common on the leeward coasts
(both the broad and the narrow-leaved
forms). Luzon, near Manilla.

I scarcely doubt that these
are all forms of T. coronaria; but
the turgid, ovate or semi-ovate capsules
are only an inch or less in length. They
are said to be yellow when fresh, the seeds
(which are exactly those of T. coronaria) enveloped
in red pulp. The largest leaves are 6
inches long and 3 inches wide; those of the
small form 2 to 4 inches long, and from 8 to
16 lines wide.

17
2. Tabernaemontana? Lavis, Vell.

Tabernaemontana Lavis, Vell. Fl. Flum.
3, t. 18; Ob. l. c. p. 375, inter Dubias.

Stat. Rio Janeiro, Brazil.

The specimen bears immature fruit only, so that the genus is indeterminate. But the leaves are alternate; they are not so ~~much~~ much ~~reticulate~~ lanceolate as oblong and acuminate at both ends, rarely above two inches in length, ^{bright} smooth and of the same green hue on both sides. The fleshy follicles and ^{the} seed ^{resemble} ~~appear to be~~ those of a Tabernaemontana.

7. Parsonsia, K. Br.

1. Parsonsia heterophylla, A. Cunn., ~~capitulata~~

Stat. Bay of Islands and Waiapu Bay, New Zealand.

As the principal fruiting specimens are broad-leaved, and the only flowering one has the tube of the corolla much longer than the calyx, they must be referred to P. heterophylla of Cunningham and of Hooker (P. albiflora of Raroult), which is Periploca capitulata of Forster in part. A sterile specimen may well resemble Raroult's figure of P. rosea; but, from the corolla Dr. Hooker refers this ^{also} to P. heterophylla.

and the Parsonsia capitulata of Delessert's Lecons.

21
8 Lyonsia, R. Br.

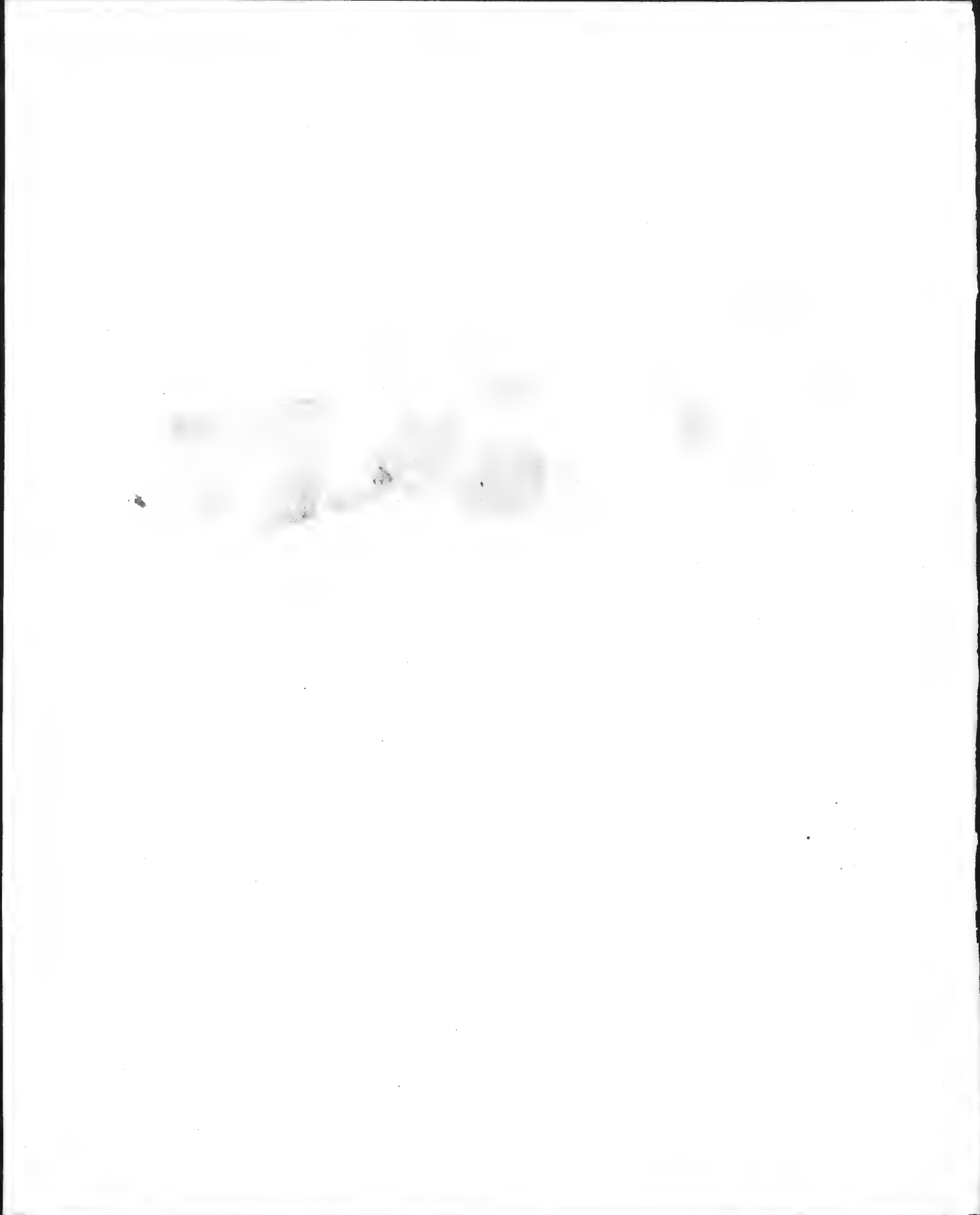
1. Lyonsia straminea, R. Br.

Hab. New South Wales, at Stun-
ter's River and near Sydney.

The corolla is essentially, but
not absolutely valvate in aestiva-
tion, the margin to the right
of the observer ^{very} slightly overlapping
the other.

2. Lyonsia ^{lavis,} glabra) sp. Nov.

L. glabra; foliis ovatis subcordatis
acutato-acuminatis; calycis lobis
triangularibus acutis brevibus;
corolla fere glabra lance tantum
annulatione barbata; squamis nec-
tarii discretis glaberrimis ovario-
rum subaequantibus; capsula cylin-
drica leviter bisulcata,



Stat. Grolan, Feejee Islands,

A woody, twining plant, glabrous, except a very minute and rusty puberulence on the inflorescence and young petioles. Leaves membranaceous, ovate or oblong-ovate, with a subcordate or rounded base and usually an acute or cuspidate acumination, veiny, the veinlets conspicuous underneath, the larger leaves 6 inches long and 3 inches wide; petiole less than an inch in length. Inflorescence as in L. Scabra, Sw.; the flowers apparently smaller; ~~and~~ the calyx shorter, glabrous, its lobes broadly triangular and acute, thick, nearly equalling the very short tube of the corolla, the small glands in their axils arose or laciniate. Corolla ^{purplish} glabrous, or very minutely and sparsely puberulent under ^a lens; the short tube moderately ventricose, about one third of the length of the oblong-

lanceolate lobes; these are ~~thick~~,
 glabrous within, and subvalvate
 in aestivation, one ~~edge~~ ^{margin}, however,
 narrowly bevelled and overlapping,
 just as in L. straminea, but
 more evidently so; the tube is
 moderately bearded only at the
 orifice. (They are straight and
equilateral, not at all contorted.)

Filaments inserted a little above
 the base of the corolla, subulate-
 filiform, as long as the anther,
 straight, pilose towards the base;
 anthers linear-lanceolate, re-
 tuse at the apex, sagittate at the
 base, the lobes somewhat incur-
 ved; they ~~equal~~ ^{are} the corolla
 in length, and are connivent
 and ~~under~~ coherent with the stig-
 ma, which, with the style, re-
 sembles that of L. scabra.

Glands or lobes of the nectary
 oblong ^{thickish}, very obtuse, entirely dis-
 tinct, glabrous, nearly as long
 as the glabrous bilocular ovary.

24

Capsule ^{not quite} ~~nearly~~ 6 inches long,
almost cylindrical, straight,
slightly grooved on each side, at
the borders of the thin dissepiment,
2-valved. Immature seed linear-
clavate, nearly half an inch
in length; the fulvous coma
thrice longer.

Mr. Brown well says of his
Lyonisia that it is "Parsonia
minis affinis." The two should
perhaps be united. The best, if
not the only distinction is ~~the~~ to
~~thickish~~ be found in the thickish
lobes of the cordia which are es-
sentially or nearly valvate in
activation in Lyonisia. To
this genus rather than to Parsonia
belongs A. Müller's P. ventricosa.
The present species is a close congener
of Schima scabra, lutea, of New
Caledonia, which DeBurdette has
referred to Lyonisia. From this it
differs chiefly in the pointed leaves,

almost glabrous inflorescence, &c.,
 the smaller and acute lobes to the
 calyx, nearly glabrous corolla,
 with merely a bearded ring in the
 throat (not with five vertical bearded
 lines), the nectary and ovary glabrous,
 and the sterile capsule. This
 comparison is made with *Labillardiera* =
Diels's figure: I have not seen *Pis.*
Haut.

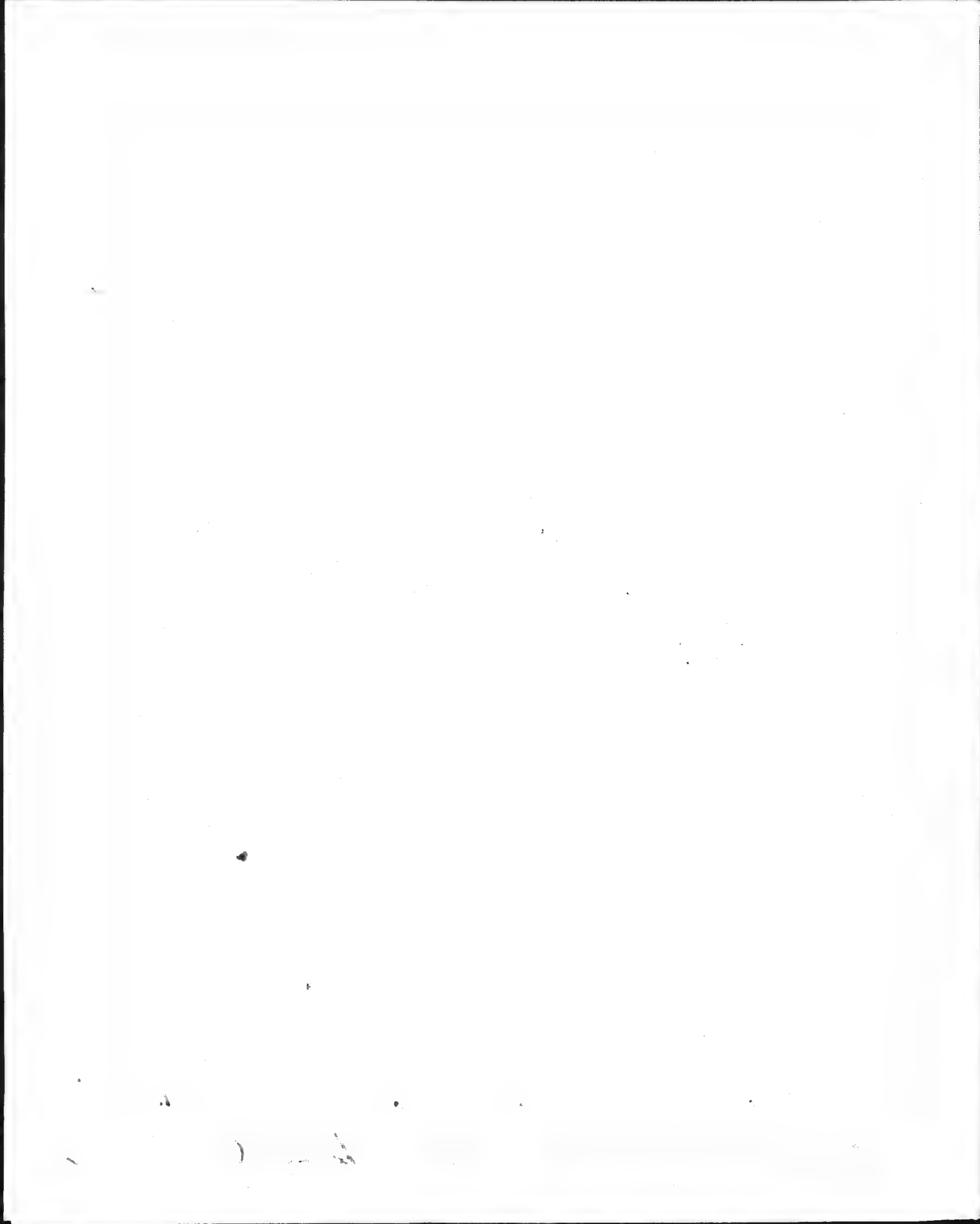
Alstonia, R. Br.

(crebre

Subgen. *Dissurasperrum*. Dem-

ina undique aequaliter, crebre

mus-



9. Alstonia, R. Br.

Subgen. Dissuraspermum, Semina
indigne æqualiter et cre-
berrime ciliato-plumosa, haud
vero comosa, basi apiceque
in acumen vel caudam pro-
ducta, cauda superiori apice
bifida; albumen tenuissimum.

Corolla lobi lineari-lanceolati,
^{extirpatione} sinistrorsum (sensu Gandollii) con-
voluti; faux barbata. — Frutices
vel arbusculæ insularum, gla-
berrimi; foliis oppositis, peti-
olis angustissime marginatis,
basi plerumq. dilatatis; cymis
patentibus.

R. Br. (Tab.)

1. Alstonia (Dissouraspermum) costata

A. foliis ovalibus ^{vel} oblongis - etiam ^{marginibus undulatis} angustis lanceolatis acuminatis
seminibus ovalibus utrinque
abrupte acuminatis vel breviter
caudatis.

Echiles costata, Forst. Prodr.

p. 20, excl. syn.

Alstonia costata, R. Br. in

Mem. Wern. Soc. 1. p. 413;

Guillemin. Zeph. Jait. p. 46

(ubi descr. Forst.); A. DC.

Prodr. 8. p. 409.

Hab. Mountains of Tahiti and
 Rimoo, Society Islands.

Forster's detailed description
 of this species, printed by Guille-
 min, and Brown's character leave
 little to be supplied, except the
 details of the seeds. Brown's

doubt whether the cilia of their margin were elongated so as to form a coma at the ends was well founded. In fact the seeds are not properly comose at all, but strongly, ^{and equally} densely ciliate-fringed all round, the fringe diverging at right angles with the margin. In this species the tails of the seed are not more than half the length of the body, or even shorter, flat, fringed equally with the rest of the margin, the lower one (pointing to the base of the capsule entire and rather blunt, the other two-cleft or notched. The rudiments of one or both of these tails, so conspicuous in the following species, are discernable in *S. ophioglyoides* of Müller, in which the hairs extend both ways to form a coma. In Forster's description

of the seed "margine cylindrica" is evidently a lappus pro margine ciliata. The capsules vary from $2\frac{1}{2}$ to 8 or 9 inches in length. The leaves vary from oval or oblong-ovate to narrowly lanceolate, as Foster remarked, and from 2 to 8 inches in length, but are all sharply acuminate. Gordia bearded in the throat, the beard extending slightly to the ~~base~~ base of the lobes. The latter are linear-lanceolate, ~~and~~ somewhat falcate, obtuse. ~~Depressed, or rather ovate and oblong, than lanceolate and acute,~~ obtusish. I cannot detect the "five corpuscles," vix armato oculo conspicuo, ~~which are~~ ~~thought~~ nor anything to represent the nectary, except obscure indications of a ring or circular disk. The stigma is subtended by a cupulate or annular indurium, and is

acutely 2-lobed or bipartite.

Plate Alstonia costata,
Alstonia costata by pod

Alstonia (Dissurasperrum) plu-
mosa, Labill. (Tab. .)

Al. foliis ovalibus ellipticis ob-
longiore obtusis nunc obtusis
subacuminatis; seminibus ob-
longis utrinque longius can-
dato-productis. (Folia nunc par-
va bipartita, nunc 6-8 polli-
caria.)

Alstonia plumosa, Labill. Sert.
Austr. Cal. p. 28, t. 32; A. Ob. l.c.

Tab. Mountains of the Freeje
and Samoa or Navigators' Islands.

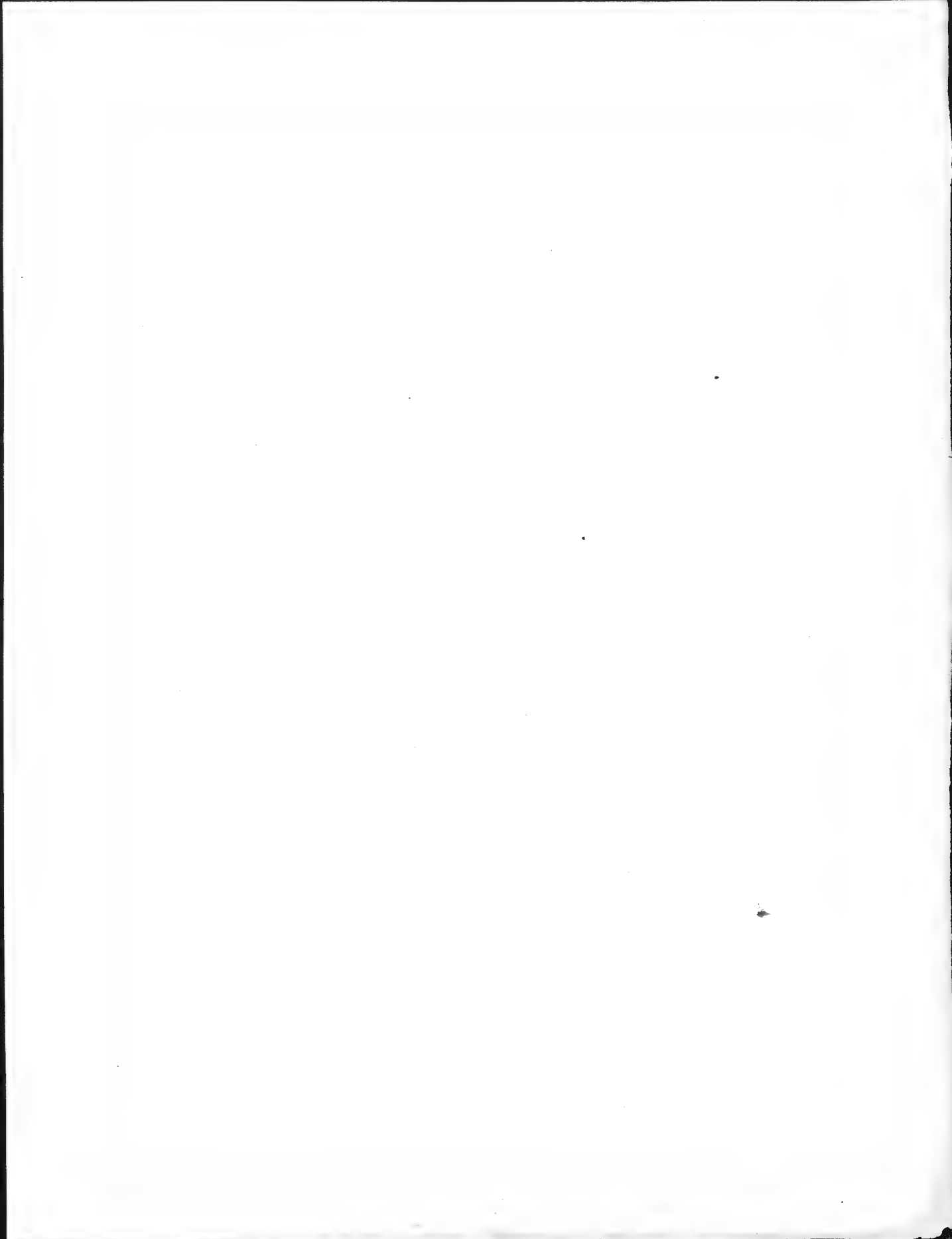
This is very near the foregoing species, nearer than would be supposed from Labillardiere's plate. For that does not well represent the stigma, which is indusiate-appendaged below and with sharper lobes above, nor the calyx, which is ~~from~~ five-cleft to the base. The lobes of the corolla, moreover are a trifle narrower and less obtuse. In our specimens these are glabrous, except at the very base; this alone causes some hesitation in referring them to Labillardiere's A. Plumosa of New Caledonia, in which they are said to be pilose for the whole length of their inner face: but the figure hardly verifies this. The

seeds, which he (Candolle) suspected to be wrongly represented) ~~and even~~ confirmed by Labillardiere, accord well with those in our specimens from the Looe Islands, except that the tails ^{of the latter} are flat, rather than ^{exactly} filiform and less abrupt at their origin; they are longer than the body of the seed, plumose-ciliate like the margins of the latter, the upper one acutely bifid at the extremity. The slender follicles vary from 3 to 9 inches in length.

These two species might very well be detached from the genus Alstonia, possibly with better reason than Blaberopus, has been. It seems wiser, however, to ~~leave~~ let the genus contain the types ~~of~~ which Mr. Brown associated in it.

Plate - Alstonia plumosa.

Flowers detached seeds. - 1.



March 14 1891
J. C. S.

Received of J. C. S.

Ord. Oleacea.

1. Olea, Tourn., R. Br.

1. Olea verrucosa, Link.

Hab. Cape of Good Hope, in the vicinity of Cape Town.

2. Olea Sandwicensis, Sp. Mw.

O. laevis; foliis lato-lanceolatis
oblongisve acuminatis integer-
rimis petiolatis supra lucidis
subtus pallidis; racemis axillaribus
brevibus; corolla profunde quadri-

partita; staminibus (an
semper?) 4; ovario conico; ~~the~~
~~styl~~ drupa ovoida (in stip.
angustifol. ellipsoidea).

Tab. Sandwich Islands:
Oahu, on the Maala Mountains
behind Honolulu; also in Kerm's
collection from Kauai (no. 479), and,
a narrow-leaved form with the
^{immature}
~~young~~ fruit elongated ellipsoidal
from Molokai, no. 482.

"A tree, twenty-five or thirty feet
high," glabrous throughout, or in spec-
imens from Kauai, with the young
parts slightly pubescent, Branchlets
tente, grayish. Leaves opposite or
sub-opposite, resembling those of Laurus
nobilis, but pale beneath, from 3 to 5½
inches long, varying from broadly lance-
olate to oblong or ovate-oblong, more
or less acuminate, ^{entire}, pinnately veined, Cori-

aceros, minutely punctate, the base acute or acutish; petiole 3 to 6 lines long. Racemes in the upper axils, from half an inch to two inches long, on a very short peduncle, many-flowered; pedicels $1\frac{1}{2}$ to 3 lines long, calyx small, 4-lobed. Corolla ^{white,} rotate, deeply 4-parted; the ~~lobe~~ divisions oval, their margins very slightly overlapping in the bud. Stamens 4 in all the flowers examined; filaments very short, inserted on the very short tube of the corolla alternate with its divisions: anthers ^{large,} as long as the corolla, oval, mucronate, somewhat introrse. Ovary elongated-conical or pyramidal, 2-celled, tapering into a very short thick style which is surmounted by a capitate two-lobed stigma. Ovules 2 in each cell, pendulous. Drupe oval, "as large as a garden cherry, blue", with a

Somewhat copious pulp and a thick, osseous putamen, one-celled, one-seeded. Albumen fleshy, inclining to corneous. Embryo of the genus; the flat cotyledons oblong. — In the narrow-leaved ^{form} ~~specimen~~ of Remy's collection, the unripe fruit is much larger, 9 lines long, and in shape quite like the common olive.

The four stamens, although unusual, are not unprecedented, being occasionally met with in Chironanthus. Variable as to foliage, as are the specimens before me. I do not doubt that they all belong to one species, except possibly Remy's no. 482, of which I have not seen the flowers.

* followed by
Blume, Endlicher, and Se-
Candolle, attributes to Chionanthus
and Linociera, an exalbuminous
seed ^{and SeCandolle forms a tribe thereupon} and a thick embryo, This is
not the case, ~~at least~~ in the original
species of either; ~~genera~~ Chionanthus
Virginica, as I had long ago noted, and
C. (Linociera) ligustrina, as C. Wright
has observed upon the living plant and
I have verified upon his specimens,
having the albumen and ^{flat} ~~thick~~
cotyledons of Olea, Blume, in writ-
ting, rightly enough, the two genera (in
Miss. Bot. 1, p. 317), still characterizes the
seed and embryo in this way; and repeats
Dr. Hooker confirms it for several Asiatic species, and
~~as he repeats these characters under his~~
~~C. sinensis, the Asiatic species should~~
~~be re-examined in this regard~~
~~even for the C. composita of the West Indies.~~
The type of Chionanthus Virginica
is sometimes three-seeded.

3. Olea maritima, var. depressa =
perata, Wall, Cat.?

Hab. Singapore. But the in-
fluence is as in O. divica.

An Olea? occurs in the
Zeeje collection, an imperfect
specimen, with forming fruit.

2. Notelaea, Nent.

1. Notelaea longifolia, Nent.

2. Notelaea ovata, R. Br.

Ital. Hunter's River, New South
Wales. A fragment of former, in
print, and of the latter, ^{as figured in Endlicher's Iconographia} - ~~photo~~, proba-
bly is not specifically distinct - with
the corolla and stamens fallen.

Ord. Jasminacea,

Jasminum, Tournef.

1. Jasminum Bahiense, DC.

Hab. Brazil, near Rio Janeiro;
"in wild situations, and to all ap-
pearance indigenous, flowers
white."

2. Jasminum didymum, Forst.

Jasminum didymum, Forst. Prodr.
p. 3; Nahl. Symb. 3, p. 2; Guillemin.
Reph. Tart. p. 40.

J. Azoricum? Hook. & Arn. Bot. Beech.

Hab. Tahiti, Society Islands;
common.
"A woody vine." This is not

Voy. p. 66, non Linn.

1. divicatum, R. Br. Prodr. N. Hll.
p. 521?

2. parviflorum, Decaisne, Herb.
Tinnor, p. 77; DC. Prodr. 8. p. 310;
Miq. Fl. Ind. Bat. 2, p. 531.

Itab. Tahiti, Society Islands;
common. "A woody vine."

Soma-Soma,
Mba^(and) Vanna-levu, Feejee Islands.

All our specimens must belong
to one species except, perhaps, an
imperfect one from Vanna-levu,
Feejee Islands, which has more
decided calyx-teeth, the truncate
border of the calyx being ~~usually~~
in all the rest minutely or abso-
lutely, toothed. The tube of the corolla
is only $2\frac{1}{2}$ to 3 lines long; and the
lobes in the same specimen variable in
form (according to age?), sometimes
acute, sometimes obtuse.



3. Jasminum simplicifolium, Forst.

Jasminum simplicifolium, Forst.
l.c.; Vahl, Enum. 1, p. 27; Sims,
Bot. ~~Asag.~~ Mag, t. 980.

J. australe, Pers. Syn. 1, p. 8; DC.
Prodr. 8, p. 306.
"J. gracile, Forst." ex Jacq. in Brouss. 1861, p. 257, sphaerul.,
an Andr. Bot. Keps.?

Stab. Samoa, Tonga or Friendly,
and Feeje Islands.

In this the calyx-teeth very
much in size, ours and those of Dr.
^{Harvey} from the Friendly Islands having them
in some cases as conspicuous as
in the figure in the Botanical
Magazine, in others shorter, while
in those from the Feeje Islands
they are minute denticulations.
Lobes of the corolla in some specimens
becoming linear-lanceolate and almost
an inch long, in these 9 or 10 in number.

4. Gasminum tetraquetrum, Sp. Nov.

J. erectum, glabrum; foliis oppositis unifoliolatis, articulo petioli obscuro; foliolo ovato-lanceolato seu ovato acuminato basi acutiuscula trinervi; pedunculis brevibus paucifloris; calyce (fructifero) tetraptero, alis angustis deorsum in pedicellum longe clavatum decurrentibus sursum in dentes lineari-subulatos verticales tubum 2-3-phlo superantes ~~extenses~~ productis.

Hab. Feejee Islands, on the mountain summit back of Mu-thuata, at the elevation of 2000 feet.

According to Dr. Pickering's note this is a ~~st~~ form "a shrub, from

six to ten feet high: calyx termi-
nating in four long segments,
and splitting laterally to expose
the berry". It is known only
in this fruiting state. But
the plant is most probably a
Jasminum and allied to ~~Blume~~
~~Blume's~~ J. carinatum from
the Celebes. The leaves, or
rather leaflets (for the articula-
tion is visible though obscure)
are about 2 inches long, coria-
ceous, attenuate-acuminate,
obscurely veined, three-ribbed at
the base. Peduncles terminal,
about the length of the petioles; the
pedicels usually 3, an inch
long, slender and vibracteolate
near the base, gradually clavate
thickened and tetragynous
upwards, where it ^{runs} ~~expands~~ into
the four-winged tube of the calyx;

The wings extending beyond the truncate border into the four narrowly subulate teeth (half an inch in length), which stand edgewise; the tube is split down one side by the enlarging (mono- or carpellary) fruit. The flowers are a desideratum.

5. Jasminum marissimum, Lindl.

Jasminum marissimum, Lindl. in

Mitch. Journ. Trp. Austr. p. 355; Muls.
Ann. Bot. 3, p. 21.

Hab. Hunter's River, New South Wales.
Apparently the same was collected at
Moreton Bay, by Mrs. Mallard.

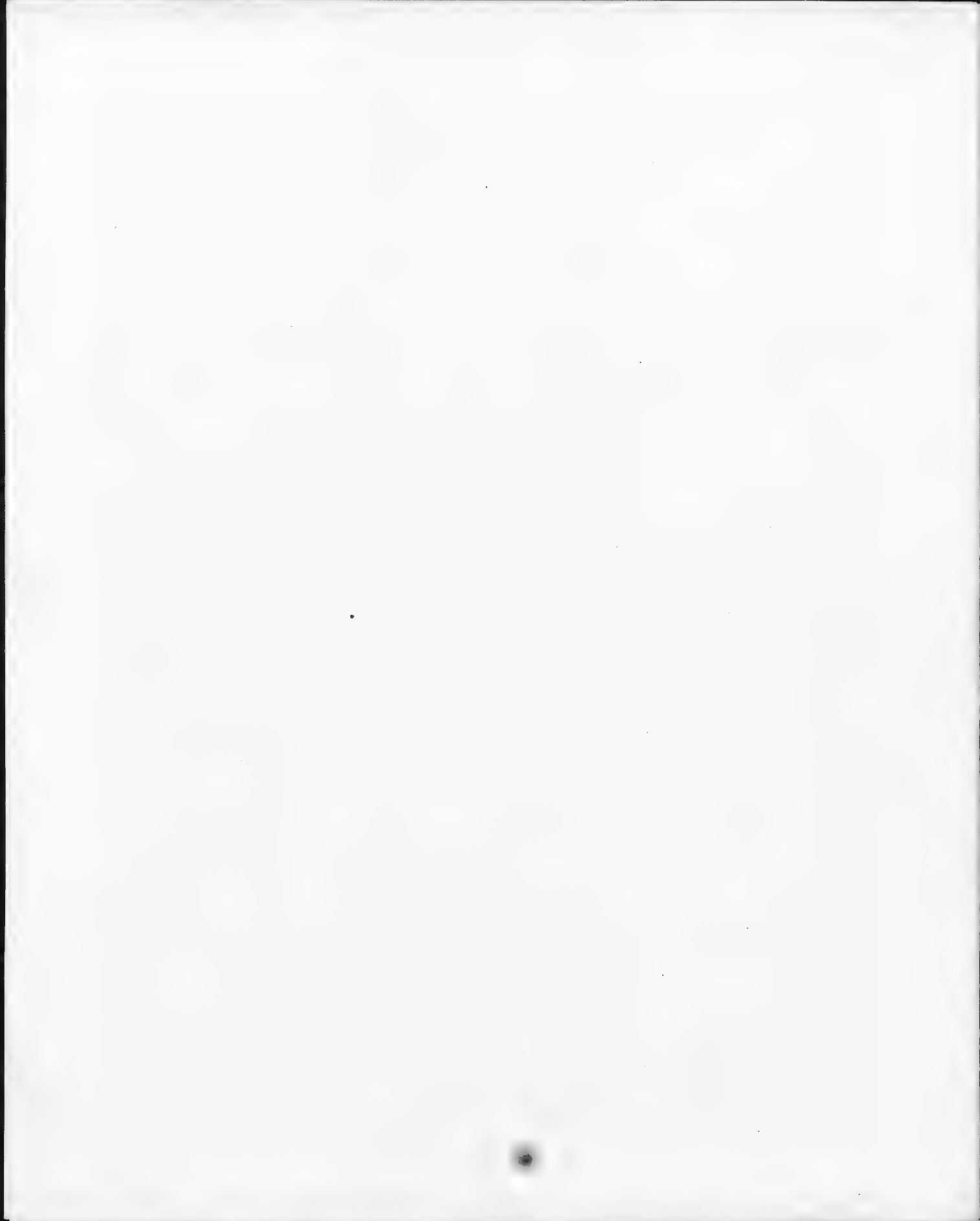
The taller of our specimens incline to
twine. The leaves are short-petioled; the
calyx-segments very slender. - What
H. Muller and also Lindley in bot. Mitchell's
collection name J. lineare, is J. micranthum,
R. Br., with simple leaves,

b. Jasminum confusum, DC.

Hab. Island in the Sooloo Sea.
The specimen quite too poor and imperfect to allow of a determination whether it really differs from J. simplicifolium, which may have minute calyx-teeth, but there is no appearance of being scandent.

~~3. Sea Area, North.~~

~~Stat. Singapore.~~



in the clouds

in the clouds

1
Ord. Asclepiadaceae.

1. Sarcostemma, R. Br.

1. Sarcostemma clausum, Koen.
& Schult.

Stat. Brazil, near Rio Janeiro, -
The same as Hostmann's coll. 962, from
Surinam; the larger leaves elliptical
or ovate-oblong, often with a small
basal sinus. Probably it includes
some other species of the section.

2. Sarcostemma Dombeyanum, Decaisne.

Stat. Peru: exsiccated river-bed near
Lima: in fruit.

3. Sarcostemma (Philibertia) marsumpi-
florum, Decaisne.

Itab. Peru; in the vicinity of
Obrajillo. "A climbing vine."

2. Peplonia, Decaisne.

1. Peplonia nitida, Decaisne.

Peplonia nitida, Decaisne in Ob.
Prodr. 8, p. 546.

Itab. Brazil in the vicinity of
Rio Janeiro.

The follicles (smooth) and seeds
are like those of Sarcostemma.
The peduncles are ~~stem~~ truly axillary,
and the flowers not at all pulver-
ulent.

3. Gomphocarpus. R. Br.

1. Gomphocarpus arborescens. R. Br.

Itab. Cape of Good Hope, in the
vicinity of Cape Town.

3

2. Gomphocarpus fruticosus, R. Br.

Hab. Madeira, St. Helena, and Sydney, New South Wales; adventive.

4. Asclepias, Lin.

1. Asclepias campestris, Decaisne?

Hab. Rio Negro, North Patagonia, on the upland plain; foliage only; probably a smoother and narrower-leaved ~~variant~~ form of A. campestris of Montevideo.

5. Ditassa, R. Br.

1. Ditassa umbellata, Decaisne, &

2. Ditassa crassifolia, Decaisne.

Hab. Brazil, in the vicinity of Rio Janeiro; only a fragment of the latter.

5. Oxyptalum, R. Br.

1. Oxyptalum Banksii, Röem. & Schult.

Oxyptalum Banksii (Röem., Schult.,
in Mart. & Zucc. Nov. Sep. 48 p. 1, p. 48, t. 29)
Syst. 6, p. 91 & O. propinquum,
Decaisne in Db. Prodr. 8, p. 581,
582.

Stat. Brazil, in the vicinity of
Rio Janeiro.

2. Oxyptalum Megastamicum, Spreng.

Stat. Brazil, near Rio Janeiro.

3. Oxyptalum (Schizostemma) Stockeri, Decaisne.

Gynanchem birostratum, Hook.
& Arn. Bot. Beech. Voy. p. 35,

forma latifolia.

Oxyptalum Stockeri, Saxatile, & con-
fertiflorum, Decaisne in Db. Prodr.
8, p. 587, 588; Gay. Fl. Chil. 4, p.
397, 399.

Stat. Chili, on the coast, near
Valparaiso; very variable in foliage.

5
7. Sonninia, Reichenb.

1. Sonninia Menziesii, Decaisne, ^{l.c.}

Diplolepis Menziesii Röem. &
Schult., Syst. b., p. 95; Hook. &
Arn.

Hab. Chili, on the heights back
of Valparaiso.

8. Matelea, Publ.

1. Matelea palustris, Publ.

Matelea palustris, Publ. Griener,
1, p. 277, t. 109; Decaisne in Ob.
Prodr. 8, p. 591

Hab. Brazil, in the Organ Moun-
tains, near Rio. Accords very well
with Publ.'s figure.

9. Tylophora, K. Br.

1. Tylophora barbata, K. Br.

Hab. Sydney, New South Wales; the original habitat.

2. Tylophora Perrottetiana, Decaisne

(Luzon,

Hab.) Philippine Islands, in the vicinity of Manila, where it was detected by Perrottet.

3. Tylophora Samoënsis, Sp. Nov.

T. Herbacea, volubilis, fere glabra;
foliis cordatis acuminatis membr-
naceis; pedunculis filiformibus
petiolo apice glandulifero longi-
oribus; umbellis plurifloris; corollis

7
virescentibus; corolla staminea
foliolis subcarnosis lineari-
oblongis. apice acutiusculo
~~tantum~~ Antheras adaequante
tantum a gynostegio liberis;
pollinibus obovato-oblongis ad-
scendentibus, ~~subsericeis~~ ~~fere~~
~~sericeis~~ brevissime stipitatis.

Ital. Savaii, one of the Sa-
moan Islands.

"An herbaceous vine," almost
or quite glabrous. Leaves mostly
from 3 to 5 inches long and $1\frac{1}{2}$ to
3 inches broad, ovate and more or
less deeply cordate, abruptly and
conspicuously acuminate, mem-
branaceous, veiny, on slender
petioles; bearing a small gland
at the junction with the lamina.
Peduncles and pedicels filiform.

Corolla "greenish", 4 or 5 lines in diameter, the ^{bracts} ovate acute lobes valvate in aestivation. Staminal ~~cor~~ corona of five narrow and but slightly fleshy appendages, which are strictly adnate to the gynostegium, only their tips which equal the anthers free. Pollinia ascending or nearly erect, scarcely if at all stipitate. Follicles 6 inches long, slender, smooth.

4. Tylophora Brackenridgei, ~~Pickeringii~~, Sp. Nov.

T. volubilis, glabrum; foliis ovatis subcordatis mucronatis; ~~petiolo~~ glanduloso pedunculis petiolum apice haud glanduliferum sub- aequantibus; umbellulis plurifloris;

6
flores "carneis" undique glabris;
corona staminea e glandulis seu
gibberibus carnosis lateraliter
compressis usque ad apicem acu-
tum adnatis (in sicco subulatis)
anthera brevioribus; pollinibus
ovalibus ~~mediis~~ juxta medium
stipiti brevi flexuoso affixis
adscendentibus.

Itab. Orolan, Fieje Islands.

Leaves $1\frac{1}{2}$ to 2 inches long,
probably somewhat fleshy or coria-
ceous, ovate and usually more
or less cordate, the obtuse apex tip-
ped with a ~~small~~ minute acu-
mination; veins evident; no gland
at the junction with the petiole;
the latter glabrous like the whole
plant, about half an inch long.
Umbels small, clustered; pedicels 3

lines long. Calyx very short; the
lobes obtuse and ciliate. Corolla
"flesh-colored"; yellowish-white in
the dried specimen, ^{glabrous,} rotate, 5-
parted, about half an inch in
diameter; the ovate-oblong di-
visions, ^{narrowly} slightly overlapping in
estivation. Body of the anthers
a line long, of a firm coriaceous
texture; the ~~proanthera~~ scarious
tips behind the small cells short
and transversely oval; the corneal
appendages a fleshy, salient, nar-
row crest adnate by its ~~area~~ thin-
ner inner edge to the back of
the body of each ^{of a brownish color,} anther, and
gradually narrowing to upward
to a point below the level of the
polliniferous cells, ^{the base dilated,} pollen-marks
short oval, ascending on a curved
stipe which is shorter than they,
~~and inserted at their~~ ^{attached}

and attached at ~~their~~ about their middle. Stigma depressed. Immature follicles smooth, short, acuminate-rostrate.

Without doubt this is a congener of Endlicher's Stybanthera biglandulosa, the pollen masses of which are probably less pendulous than is represented. The structure of the androecium is very similar; but the corneal appendages are ~~transversely~~ transversely dilated at the base, thence gradually tapering to an acute summit, which is perfectly adnate to the back of the anther. In Night's Gphisia (Tylophora Gphisia and Gwanii, Decaisne) I find the same structure, the ^{fleshy} appendages equally adnate, and laterally compressed.

~~Stybanthera~~ " " "

20. Marsdenia, R. Br.

1. Marsdenia maculosa, R. Br.

Stat. New South Wales, at Sydney
and on Hunter's River.

11. Gymnema, R. Br.

Gymnema, Bidaria, & Gongro-
nema, ^(Endl.) Decaisne in Sb. Prodr.

1. Gymnema subundum, Sp. Nov.

G. volubile, undique glabellum;
 foliis ^{membranaceis} ovato-lanceolatis seu ovato-
 oblongis basi rotundatis vel sub-
 cordatis; pedunculis petiolum
 adaequantibus; umbella saepius
 bifida; corolla rotata 5-partita
 imbricis squamulis fere obsoletis
 sinibus instructa; gynostegio
 brevissimo.

Hab. Feejee Islands; on the
 mountains of Muthuata, according to
 the ticket.

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Of this there is a single specimen, in flower, with a slender stem; the young shoots, leaves, calyx, &c. pilose-pubescent under a lens, to the naked eye nearly glabrous. Leaves opposite, membranaceous, 2 or 3 inches long, with somewhat undulate margins, acutish, acute, or acuminate, pinnately veined, the base either rounded or somewhat cordate; the petioles half an inch long. Peduncles solitary, nodose thickened at the insertion of the pedicels; this ~~node~~ receptacle usually dividing and each division lengthening into a thickened rhachis about two lines long. Pedicels numerous, about 3 lines long. Calyx small, much shorter than the corolla, the lobes roundish. Corolla convolute in aestivation, but the margins only

15

slightly overlapping, the expanded
5-parted corolla only 2 to 3 lines
in diameter, greenish, or the
upper surface dull purple,
glabrous within and without,
but the margins of the oblong
obtusely divisions obscurely
ciliate; at ~~the sinuses~~ each
sinus is a very ~~small~~ short
fleshy squamula, almost ob-
solete, but evidently answering to
the appendages of the corolla in
the typical species of Gymnura.
There are no decurrent lines or
ridges below the squamulae; indeed
the tube of the corolla is almost
wanting. No corona, glands, or
other appendages to the androecium,
which is very short. Anthers, 5. of
the genus. Pollen-masses between
clavate and obovate, erect, con-
stricted a little above the insertion

16
of the short stipe. *Stigma*
umbonate, Follicles not seen.

The aestivation of the corolla in
Gymnema is said ^{by Planch} to be valvate,
and ~~is~~ ^{is particularly} specified in his *G. (Gymnema)*
recurvifolium. In ~~all~~
the species I have examined it is
convolute, as described by DeCaisne,
but in all ~~the spec~~ of the present
collection, and especially in *G. stenophyllum*,
the margins so slightly
overlap that ^{the} aestivation would readily
be taken for valvate.

(Tab.)
2. *Gymnema stenophyllum*, Sp. Nov.

G. fruticosum, erectum, ramosis-
simum, fere glabrum; foliis cor-
iaceis linearibus basi attenuatis
marginibus revolutis, costa subtus
pilosula; pedunculis axillaribus

7
alte 5-fida)

brevissimis; corolla rotata ~~5-partita~~
~~tita~~ inappendiculata, lobis
extus glabris intus tenuiter
barbatis; gynostegio brevissimo,
pollinarum stipitibus gracili-
bus spiratiter contortis.

Hab. Izu Islands; on the
barren upland of Mithuata.

This is "a shrub, 3 to 5 feet
in height", according to Dr. Pickering's
notes, apparently very bushy,
the slender glabrate branchlets
crowded with leaves, and flowering
in most of their axils. Leaves
narrowly linear, 2 to 4 inches
long and 2 lines or less in width,
tapering below into a short pe-
tiole, in some specimens so
revolute on the margins as to
appear filiform, coriaceous,

glabrous except the midrib beneath, which is minutely hairy, the upper surface lucid and veinless, the lower indistinctly feather-veined. Peduncles one or two lines long, or almost wanting; the numerous pedicels one or two lines long, crowded on a short squarrose rachis. Lobes of the calyx oval, ciliate, nearly half the length of the corolla. The corolla is apparently white (not greenish-brown as recorded in Dr. Pickering's notes), rotate when fully expanded, 3 lines in ^(glabrous externally) diameter; the oval obtuse lobes delicately bearded with a white pubescence inside, almost valvate, the margins lightly overlapping in aestivation; the sinuses and throat wholly destitute of appendages. Androecium very

19

short, destitute of coma, or glands,
the ^{inflexed summit} scarious appendage of the anther
large, ovate and obtuse. Pollinia
clavate-oblong, erect, shorter than
their filiform spirally-contor-
ted stipes. Stigma unborate.
Follicles unknown.

The pollinia accord with the
character of Sarcoborus, R. Br. (but
they are not "apice lateraliter pel-
lucida" as Miquel has it); the
fruit is needed to determine if
our plant belongs to that genus.
As the genera are arranged by Decaisne, the
present plant does not accord throughout either

Plate with Bidaria or Gongromma
both manifestly inseparable from
Gymnomma.

It has recently been
collected by Dr. Seemann (no. 322), but with ~~also without~~
the fruit with only young ~~fruit~~ follicles; these are
sterile, tapering, and smooth.

Plate

26

There is in the collection moreover, a specimen ticketed as from New South Wales, which is apparently referable to Gymnura as established by Brown, but to none of his species. It has a glabrous ~~in~~ corolla wholly destitute of squamula or other appendages. The materials are too imperfect for publication.

21
12, Itoya, K. Br.

1. Itoya bicarinata. Sp. Nov.

H. scandens; foliis glabellis ~~gla-~~
subcarnosis planis obscure pen-
nerviis ovalibus sen ovatis
brevissime ~~se~~ abrupteque acumi-
natis basi rotundatis subcorda-
tisve, ~~limbo~~^{laminis} supra petiolum his-
tellum glandulosa; pedunculo
pedicellis haud longiori; sepalis
lineari-oblongis; corollae ^{albæ} extus glabræ
intus puberulæ lobis ovatis
acutis planis; corone stamineæ
foliolis incrassatis, disco obovato
concavo angulo interno longi-
usculè acuminato, marginibus
haud revolutis, dorso eximie bi-
carinato.



22

Hab. Manna, Tutuila, and
Savaii, Samoa Islands. Also
Tongatabu or Feejee Islands.

Stem fleshy, trining; the younger
branches more or less pubescent,
or hairy, as are the Petioles,
Peduncles, Pedicels, and calyx.
Petioles 6 to 18 lines long; the blade
of the leaves 3 to 5 inches long,
and 2 to 4 inches broad, doubtless
moderately fleshy, but ~~indistinctly~~
showing rather indistinct pin-
nate veins in the dried specimens,
minutely pubescent or glabrous,
apparently not glaucous; the upper
face having a single or triple gland
at the junction of the petiole with
the midrib; ~~Pedunc~~ The margins
not revolute. Peduncles 6 to 18
lines long; Pedicels slender, about
an inch long. Corolla 9 or 10 lines
in diameter, "white", of a rather

texture for the genus, glabrous on the lower and obscurely pubescent on the upper surface, the margins of the triangular-ovate and acute lobes not revolute. Pieces of the staminal crown a line and a half ^{long} on the concave and obovate and internally acuminate projected upper surface or disk, their vertical thickness little less, inclusive of the two strong and closely approximate keels, the edges of the disk acute. Follicles narrow, 5 inches long.

This may ~~perhaps~~ be Forster's Asclepias volubilis (non Linn.) from

Tanna. It is the Hoya Billandieri of Dr. Seemann's list, no 319 (Fiji Islands), but hardly of DeCaisne; for the ~~the~~ pieces of the staminal crown are strikingly acuminate, instead of "angulo ^{riore} ~~intertexto~~ obtuso."

Among the specimens too imperfect for determination are
 1. Foliage, (from the Feejee Islands, of ~~what~~ a Itoa?)
 which accords with "I. pilosa sp. nov." of Seemann's list, no. 321 (which we possess equally without flowers), only the leaves are glabrous, or only obscurely pubescent along the midrib underneath.

2. Two, or perhaps, three species of Itoa from the Samoan Islands, and one from the Mangsi Island, without flowers, &c. - and

2. Itoa diptera, Seem.

Stat. Feejee Islands, Folia

Without flowers or fruit. The same is the case with our specimen from Dr. Seemann's collection, no. 320, so that I am unable to characterize the species.

13. Collyris, Vahl.

1. Collyris major, Vahl.

Collyris major, Vahl in Act.
Soc. Hafn. 6, p. 141, ex Wall. Miq.
Jeb. Ind. Bot. 2, p. 513.

Prusula arborum, Rumph. Herb.
Ambo. 5, p. 473, t. 175, f. 3.
Cynchophyllum imbricatum, Blume, Bijdr. p. 1062.
Dischidia? Collyris, Wall. Pl. Asiatic.
Rav. 2, p. 35.

Hoya imbricata, Decaisne in Ab.
Prov. 8, p. 137, & Silvest. 2c. Del. 5.
t. 90.

Stat. Small island in the Sooloo
Sea; without flowers.

(Doubtful)
A Dischidia or Leptostemma,
with foliage only, was gathered at
on the Majajai Mountains, Luzon.



Ord. Gentianaceae.

The species, being all such as have already been investigated, need only be enumerated, as follows.

Chironia baccifera, Linn., picked up at the Cape of Good Hope.

Erythraea australis, R. Br., with uniformly pentamerous flowers, from collected at Sydney, &c. New South

Wales. Capiscera diffusa, R. Br., from Luzon, near ^{Manilla.}

Lisianthus obtusifolius, Griseb., Brazil, near Rio Janeiro.

Gentiana Magellanica, Gaud., ~~at~~ ~~Orange Harbor, Zuegia~~, with pentamerous flowers, and narrower calyx lobes, and with this a few sterile stems of G. prostrata, Vanke, - from Orange Harbour, Zuegia.

Gentiana concinna, Hook. f.,
(probably, as suggested, a form of G. montana)
from Lord Auckland Islands.

● Gentiana cerina, Hook. f.,
mostly less leafy than Dr. Hooker's
plant, from Lord Auckland Islands.

Gentiana limoselloides, H.B.K.
with some of var. tubulosa, Griseb.,
from the Andes of Peru above Baños,
at Casa Blanca. &c.

Gentiana saxicola, Griseb., at
Casa Blanca, Andes of Peru.

Gentiana primulifolia, var.
dilatata, Wedd., Chlor. And. 2. p.
53, t. 52., still more developed, from
Baños, Andes of Peru.

Gentiana incurva, Hook., Alpa-
marca and Casa Blanca, high
Andes of Peru.

Gentiana sedifolia, H.B.K.,
short-leaved and long-leaved, ^{condensed} forms, from
Alpamarca and Casa Blanca, Andes of Peru.

Italenia Dombeyana, Wedd. (H.
gracilis B. Griseb. in Ob.) from Ba-
nos, Andes of Peru.

● Villarsia parnassiaefolia, R.
Br., from Woolungwig, New South
Wales.

Limnanthemum Kleinianum,
Griseb.? Tree-Islands; "common
in Taro ponds, probably introduced."
Collected by Dr. Harvey and by
Dr. Seemann, the latter's speci-
mens larger-leaved and more
like L. Kleinianum; but in
none of them are the three ribs at
base prominent underneath, the flowers
(too poor for investigation) are
much smaller, and the seeds flat
(and ^{rattled} shap-edged, perfectly smooth.
Those of L. Kleinianum of India (in
the specimens coll. by Dr. Thomson ^{in the Carnatic} and
distributed by Dr. Hooker) are not badly
represented in Herb. Bot. Misc. 3, pt. 30,

being turgid, obtuse at the margins, and ^{their face} minutely mucicate by ^{salient} ~~minute~~ spiculae which rub off.

● Erythraea subaeoides, Gray, in Proc. Amer. Acad., 6, p. (the Schenkia subaeoides Griseb. in Bomplandia, 1, p. 226) was not collected at the Sandwich Islands by our naturalists.





Ord.

Solanaceae.

Solana prostrata, Linn. f.,
was collected on the coast of Peru,
at Callao. Two others are menti-
oned in Dr. Pickering's notes on
Peru, but no specimens occur in
the collection.

Solana spathulata, Ruiz and
Pav., is evidently one of those above;
the other is wholly uncertain.

Lycopersicon Peruvianum,
Mill., with foliaceous reniform bracts,
was gathered in the environs of

Obrajillo, Peru.

Lycopersicon cerasiforme, Dun.,
the normal state of L. esculen-
● tum, Mill., in the coast region
of Peru, near Lima; also L.
regulase, Dunal, or near it, canescent, and the fruit
Solanum tuberosum, Linn., pubescent.

from Baños, Peru; ~~appearing like~~
~~a wild specimens; but not~~ said to
be frequent along the upper margin
of the region between the commence-
ment of the rains and the upper
limit of cultivation.

Solanum nigrum, Linn., which
includes fifty so-called species ad-
mitted by Dunal in the Prodro-
mus, was collected, in various forms,
at Madeira, Rio Janeiro, Chile,
at Valparaiso, Peru, Sandwich
Islands, Tahiti, Society Islands,
Samoa and other South Sea Islands,
New Zealand, St. Helena.

(New South Wales,
and

Solanum obovatum, Linn.,
picked up at St. Helena and at
Sydney, New South Wales.

● Solanum aculeatissimum, Jacq.
(S. ciliatum, Dunal), from Rio Ja-
neiro, Brazil, and around Iona-
hine, ^{where several collectors have met with it, an} ~~adventive~~
~~introduced~~ plant, Sandwich Island, ~~from~~

Solanum baavurana, Vell. Fl.
Flum. 2. 7. 212, common about Rio
Janeiro.

Solanum indigoferum, A.
St. Hil. (S. umbel caeruleum,
Vell., at Rio Janeiro.

Solanum argenteum, Dunal, at
Rio Janeiro.

Solanum Kadula, Vahl., at Rio
Janeiro.

Solanum piluliferum, Dunal, as far
as can be determined from the fragment,
near Rio Janeiro.

Solanum rufescens, and var. glabrescens, ~~San~~ Sendtn., from near Rio Janeiro.

● Solanum cernuum, Vell. (S. jubatum, Dunal), near Rio Janeiro.

Solanum Paratyense, Vell. ? from near Rio Janeiro.

Solanum curvispinum, Dunal, ? from Rio Janeiro.

Solanum paniculatum, Linn., from Rio Janeiro.

Solanum elaeagnifolium, Cav., var. leprosum, Dunal, quite like Chilean and some Texan forms, at the mouth of the Rio Negro, North Patagonia.

Solanum concavum, Lindl. ~~as well as can be determined~~, in fruit, from Chili above Santiago. Berries globular, of the size of large peas.

Solanum amblophyllum, Hook. Bot. Misc. 2, p. 231, from the valley of

Canta, below Obajillo, Peru; the specimen insufficient for the completion of the characters. "Berries small and red."

Solanum pulverulentum, Pers., from Baños, ^{in the same district,} higher up than the last.

Solanum Nelsoni, Dunal, or what I take to be that species, from the Sandwich Islands. Vide infra.

Solanum Sandwicense, Hook. & Arn. (S. Wookense, Dunal), from the Sandwich Islands. Vide infra.

Solanum incompletum, Dunal, from the Sandwich Islands. Vide infra.

Solanum viride, Solander, K. Br., Tahiti, Samoa, Tonga, and Feejee Islands, and Horden Coral Island. ~~Apparently includes S. anth-~~
~~anthropophagorum, Seem.~~ In vari-
ous forms, one of which, ^{may be,} apparently ~~is~~
S. anthropophagorum, Seemann, figured in

Bomplandia, 10, t. 14 (1862.)

Solanum inamoenum, Benth.
at the Feejee Islands, where Harvey
and Seemann also collected spec-
imens. Nothing to add to the
published character, except that
the branches do not appear to be
tortuous, the leaves are rarely ob-
lique, and the cymes ^{often} are bipid
or racemose.

Solanum Amicorum, Benth.,
at Tongatabu, — a poor specimen
adding nothing to our knowledge of
the species. But Dr. Harvey collected
fine specimens in the Friendly Islands,
with flowers and fruit, the latter
globose and resembling that of the
preceding species.

Solanum repandum, Forst.,
from the Society to the Feejee
Island; "naturalized, sometimes
cultivated, introduced by aboriginal
settlers." A variety with the leaves

lvs. less downy, when full grown,
the flowers rather smaller, with
a white corolla, the ovary nearly
glabrous, the fruit smooth,
"as large as an apple, white
with a purplish tinge when
unripe, afterwards becoming yellow and edible, usually cooked,
but pleasant to the taste in
the crude state," is cultivated
by the Freejians (at Nalua,
Muthuata, &c.). It was ~~called~~
~~by~~ named the Freejie To-
mato. Tab. represents
a flowering branch, and a fruit
of the natural size.

Solanum aviculare, Forst., including S. laciniatum Ait., from New
Zealand and ~~South~~ ^{South} Wales. A specimen of the form
with entire leaves is ticketed as from
Freejie Islands, but it is not referred to
in Dr. Pickering's list, and there is

reason for supposing that it ~~came~~
was gathered in New Zealand.

● Solanum pungetium, R. Br., at
Sydney, New South Wales.

Solanum elegans Dunal, and S.
violaceum, R. Br., from Hunter's
River, New South Wales.

Solanum indicum, Linn., at Manila,
Luzon.

Solanum torvum, Swartz, at
Singapore.

Cyphomandra divaricata,
Sendt., as far as can be judged,
although that species has not before
been met with near Rio Janeiro.

Bassovia lucida, Dunal (Aureli-
ana, Sendtn.)

Saracha dentata, Ruiz & Pav.?,
from Peru.

Nicandra physaloides, Linn., picked
up at Sydney, N. S. Wales and St. Helena.

Physalis Peruviana, Linn.,
with edible fruit, from Madeira,
the coast of Peru and Chili, Ta-
hiti, ^(P. flaccida, Island.) Feejee and other South
Sea Islands, New Zealand, New
South Wales, and St. Helena.

Physalis angulata, Linn., from
Callao ^{and Lima,} of Peru, Tahiti, Tongatabu,
Samoa ^{and other South Sea} Islands, and Manilla, Lu-
zon.

Withania (Stygnoticum) son-
nifera, Dunal, at St. Jago, Cape
de Verde Island, and Cape of Good
Hope.

Hebecladus biflorus, Miers, from
the Andes of Peru at Baños.

Salpichroma glandulosum Miers
(Atropa glandulosa, Hook. & C.), from
the Andes of Peru above Baños.

Acristus arborescens, Schlecht.
(Atropa arborescens, Linn.), from Rio

Janeiro, Brazil, and from Lima, Peru, manifestly the same species, as Schlechtendal, ~~Guss~~ Lindtner, Grisebach, &c., have determined.

Lycium infaustum, L. filifolium, var. minutifolium, L. Patagonicum, and L. pubescens, Miers, Contr. 1. t. 71, 72 (the latter without flowers, and all inclining to run together) may be identified among the specimens gathered at ~~Pico~~ the mouth of Rio Negro, North Patagonia.

Lycium chilense, Miers, from Chili at Valparaiso.

Lycium salsum, Ruiz & Pav., from the coast of Peru.

Lycium sandwicense, n. sp., Oahu, Sandwich Islands. Vide infra.

Lycium vulgare, ~~Linn~~ Dunal (L. Barbarum, Linn. sp. ed. 2. L. chinense, Willd.) introduced at Tongatabu.

Lycium rigidum, Thunb., picked
up ~~at~~ Cape Town, Cape of Good Hope.

● Solanandra viridiflora, Sims, from
Rio Janeiro, Brazil.

Datura Metel, Linn., St. Jago,
Cape de Verde Islands.

Datura quercifolia, H. B.K.,
marked by the great spines on the
fruit, from Valparaiso, "seemingly
indigenous on the sands of the sea-
shore", but noted in the Flora Chilena
as found in ~~some~~ gardens.

Datura Stramonium, Linn.
"Tahiti", but not enumerated in Dr.
Pickering's list, nor by Griseb.

Datura alba, Nees, Luzon,
near Manila.

Hyoscyamus albus, Linn., at
Madeira.

Nicotiana acuminata, Graham,
Chili near Valparaiso.

Nicotiana glutinosa, Linn.,
Peru, near Lima.
Nicotiana ^{paniculata, Linn.} ~~paniculata, Walp.~~, from
between Lima and Obrajillo,
Peru, and elsewhere.

Nicotiana suaveolens, Labr.,
Hunter's River, New South Wales.
Miternichia principis, Mikn.,
Brazil near Rio Janeiro.

Cestrum lavigatum, Schlecht.,
and C. bracteatum, Link & Otto, from
near Rio Janeiro; - the bark of the
latter said to be used as a substitute
for cinchona.

Cestrum Parqui, L'Hér.,
from Valparaiso, Chili.

Cestrum auriculatum, L'Hér.,
and C. leptanthum, var. maius, Du-
ral, from Peru, at Lima and to-
wards Obrajillo; the latter species a
new variety of the former.

Finally there are in the collection

scanty and imperfect materials of two, if not three, species of the Sandwich Islands, apparently of a new genus. The characters are noted under the name of *Proterops*; vide infra.

1. Solanum, Linu.

1. Solanum Nelsoni, Dunal.

• S. { inermis, pube stellata
fulvo- seu flavido-tomentosum;
caulibus fruticosis procumbenti-
bis; foliis cordatis ~~seu ovatis~~ ~~vel~~
vel rotundo-subcordatis integer-
rimis utrinque molliter tomen-
tosis saepe cum axillari parvo;
racemo paucifloro pedunculato
dumum laterali; floribus extus to-
mentos; calycis ~~trivis~~ lobis ova-
tis obtusis corolla 5-fida plica-
ta triplo brevior; antheris apice
attenuatis incurvis filamento
(in sicco rugoso) subduplo longi-
oribus.

Solanum Nelsoni, Dunal in

Ob. Prov. 13, p. 123?

p. 92?

S. argenteum, Hook. & Arn. Bot. Beech. Voy.
S. rotundifolium, Nutt. in Nutt. Hook.

Sandwich Islands, on the
sands of the low isthmus of
Maui. (Oahu, Kuny, no. 442.
● Kanai, Nuttall in Herb. Hook.)

Although I have not seen
Nelson's specimen in the Banksi-
an herbarium, upon which Dr. A. C. Sm.
in 1819 drew up his description of
this species, I presume it is the
plant here characterised from
ampler materials. The grounds
of doubt are merely these. Dr. A. C. Sm.
describes the corolla as scarcely
twice the length of the calyx, ~~and~~
~~the segments of the latter~~ ^{with} ~~as~~ nar-
^{segments} row (laciniis angustis), and he
places the species in the section Pa-
chystemonum. But in well devel-
oped flowers the corolla is thrice
the length of the calyx, and the
lobes of the latter ovate and obtuse,
^{but} with age becoming somewhat nar-

rower. And the anthers, although ~~short~~ rather short, are strongly attenuate at the summit, and their cells open by a minute and strictly apical pore. It is probable that the ^{original} specimen did not admit of sufficient examination. The branches in the specimens before us, appear to be sarmentose, the younger ones herbaceous. Leaves from one to two inches in length and breadth, generally cordate-ovate in outline, obtuse, clothed with a close and thick stellate tomentum, which is usually whitish or fulvous on the lower surface but yellowish or ferruginous on the upper; petiole 5 to 9 lines long. The small axillary leaf when present is from 2 to 6 lines in length, and more or less pectioled. Peduncle normally terminal, about an inch long; ~~near~~ the

flowers rather few and racemose,
corolla half an inch in diameter
when fully developed and expanded,
strongly plaited, probably
whitish. ~~Or~~ Filaments in the
specimens bellate-mucose, fully
half the length of the oblong
and taper-pointed anthers. Ovary
hairy; style slender.

Solanum Sandwicense, ^{S. Arn.} Hook.

S. pruticosum, inermis; foliis sub-
longe petiolatis ovatis (basi ob-
tusa vel rotundata) integerrimis
undulatis vel ~~sincato~~ angula-
to-sinuatis supra pube stellu-
lata minuta parca delapsa
glabratis subtus ramis floribus-
que cano- vel ochraceo-tomen-

tosis; cymis pedunculatis plu-
rifloris ~~erigatis~~ demum lat-
eralibus; pedicellis gracilibus;
calycis lobis subulatis corolla
fere 5-partita (segmentis aestiva-
tione valde induplicatis, evolutis
ovalibus obtusis) 3-4-plo bre-
viribus; antheris oblongis ar-
curatis apice subattenuatis, po-
ris apicalibus. Indit in densum
to tenuiore minus incano, et
in var.? in pra dicta crassiore
~~ferrugineo~~ purpureo.

Solanum Sandwicense, Hook. &
Arn. Bot. Beech. Voy. p. 92.
S. Woaense, et var. ~~erig-~~ cran-
ulatum, Dunal in Sb. Prodr.
11, p. 269.

Var. β ? Kavaense: foliis ovato-
oblongis magis acuminatis,

tomento crassius purpureo;
calycis lobis ~~subulato~~ - setae
angustissimis.

Hab. Oahu, Sandrich Is-
lands, on the mountains, frequent
at the elevation of 1500 feet;
found by nearly all the collectors.
Var. B? On the leeward verge of
the tabular summit of Kanai,
at the elevation of about 3700
feet.

A shrub, about six feet high,
variable in foliage, ~~and but not~~
but pretty well marked; the fully
expanded, ^{"bluish"} corolla almost an inch
in diameter, the globose berries a-
bout half an inch in diameter;
the leaves varying from two to 6
inches in length, sometimes the
adult ones merely greyish - hoary
underneath, but mostly whitened,

and with a fulvous or ochraceous hue, with a ~~close and~~ fine and closely appressed stellular tomentum. The single and imperfect specimen from Kauai, regarded as a variety, may prove distinct, but it will more probably be ~~found to merge~~ ^{traced} into the present species.

3. Solanum incompletum, Dunal.

S. frutescens, subtomentosum, aculeis igneis validis aut paucissimis aut numerosis (praecipue foliariis rarissime caulinis) armatum; foliis ^{longe petiolatis} ovatis oblongisve sinuatis vel subpinnatifidis (lobis brevibus obtusissimis) supra stellulato-puberulis subtus cum inflorescentia fulvo- seu ochra-

ceo-tomentosis; pedunculis later-
alibus brevissimis plurifloris; caly-
cis lobis brevibus obtusis; corolla
profunde 5-fida (alba?), segmen-
tis oblongis; antheris lineari-
oblongis arcuatis sursum vix
attenuatis, poris apicalibus ma-
jusculis; bacis globosis parvis.

Solanum incompletum, Dru-
al in Ob. Prodr. 11, p. 311.

Stat. Hawaii, Sandrich Island,
Nelson (without flowers or fruit), Re-
my, no. 451 (a very aculeate form,
in flower), and fruiting specimens
in the collection of the Expedition.

Apparently only a foot or two
in height and woody only towards
the base. The prickles in our spe-
cimens few and only on the leaves,
in Remy's abundant on the leaves

petioles, pedicels, and calyx; they are pretty stout, straight, flattish, reddish, and 2 or 3 lines in length.

● Leaves $1\frac{1}{2}$ to $2\frac{1}{2}$ inches long, and with petioles of half an inch or over an inch in length, mostly obtuse at both ends, rather oblong or oval than ovate, and rarely showing any tendency to become cordate. Peduncles 3 to 6 lines long, inflorescence short, subracemose or bipid. Fructiferous pedicels half an inch long. Lobes of the calyx short-oblong or ovate. Corolla 3 or 4 lines long, apparently white, sparsely stellate-hairy externally. Filaments almost as long as the anthers; which are a line and a half in length, ^{very little} ~~scarcely at all~~ narrowed upwards, the pores occupying the whole apex of the cells,

and looking upward. Berries half
an inch in diameter, or smaller.

Having been collected in Cook's
Voyage, this is in all probability
indigenous to Hawaii. I do
not identify it with any other of
the numerous species of the group to
which Dunal referred it, and by
the foliage, apparently correctly.

2. Lycium, Lin.

1. Lycium Sandwicense, Sp. Nov.

L. inerme, glabrum; ramis rigidis;
foliis subcarnosis spatulatis ob-
tusissimis ~~ex~~ basi attenuatis vix pe-
tiolatis plerisque fasciculatis; pe-
dicellis solitariis folio brevioribus;
floribus tetrameris; calycis brevi-
ter 4-fido lobis late triangularibus

tubum corollae adaequantibus;
lobis corollae lobis tubo longi-
oribus patentissimis; filamen-
tis basi glaberrimis; bacca
globosa.

Hab. Oahu, Sandwich Isl-
ands, "on the barren coast - crater
called Diamond Hill, near Hono-
lulu.

Although ^{found} ~~collected~~ so near
Honolulu, in the district visited
by so many naturalists, this
Lycium ~~has~~ occurs in no other
collection that I know of. Dr.
Pickering, whose judgment in this
regard is critical, records it as an
undoubted native; and indeed it does
not accord with any one of Mr.
Miers' sixty nine described spe-
cies, so that I am obliged to treat
it as new. Its peculiarities are

its fleshy leaves, as if ~~it grew~~
growing in the vicinity of salt
water, and its tetramerous flowers,
with the corolla so deeply cleft
that the species falls ~~decidedly~~
into Miers' section Macrocope,
the four lobes being larger
than the tube. Otherwise its
affinities appear to be with L.
vulgare. But there is no hairi-
ness at all at the base of the fila-
ments; these are either glabrous through-
out, or with some very delicate pu-
bescence near the middle. Leaves
about an inch long, and 3 lines wide
near the rounded apex, thence
narrowing gradually to the slender
~~and nearly so~~ base, ~~nearly sessile~~
not distinctly petioled, veinless, ex-
cept the faint midrib. Pedicels 4
to 6 lines long. Calyx $1\frac{1}{2}$ to 2 lines
long, the lobes a little shorter than

the tube. Lobes of the glabrous
corolla 3 lines long, oval, retic-
ulate-veiny. Berry 4 or 5 lines in
diameter, "saline to the taste,
but edible."

Quercus the
Andromeda species

3. *Asplenium*, Sw. Gen.

Calyx campanulatus, 4-dentatus
vel subbifidus, immutatus.
Corolla breviter hyprocaterimor-
pha, limbo quadripartito, lobis
ovatis astivatione valvato-induplicatis.
placato-val-
vatis. Antherae 4 sub fauce
insertae, sessiles, lineares, in-
appendiculatae, loculis intror-
sum longitudinaliter dehis-
centibus. Discus hypogynus
nullus? Ovarium globosum,
estipitatum, biloculare, loc-
ulis pluri ovulatis: stylus
breviusculus: stigma bifidum
bilobum: ovula subcampylo-
trypsa. Bacca (vix succosa?)
calyce repleta. forte siliisicca.
Semina plurima subreniformia,
majuscula. — Arbores vel fruti-
cos Cestroides Cestri sen Lyci-
facie, Sandwicensis, foliis integerrimis

These plants are named and described from very incomplete as well as scanty materials, in the hope that they may elicit out ~~more~~ imperfect materials which may perhaps exist in some European herbaria, or ~~may direct attention~~ that they may attract attention at the Sandwich Islands. Their aspect is rather that of Cestrum, but I know not to what genus they are most ~~allied~~ related. The mature seeds are unknown; from the shape of unripe ones I suspect the embryo to be curved.

1. Nothocestrum latifolium. Sp. Nov.

N. foliis subpuberulis late ovalibus seu ovatis obtusis; corolla extus subsericea, tubo calyce ^{briviter} ~~campanulato~~ duplo longiore; bacca globosa.

Hab. Oahu, Sandwich Islands, on the ridge of the Kaala Mountains.

A shrub "about 12 feet high", with stout branchlets. Leaves membranaceous, about 2 inches long and $1\frac{1}{4}$ to $1\frac{3}{4}$ inches wide, sometimes inclining to obovate, rather acute at the base; petiole ~~5-6~~ 6 to 10 lines long. Pedicels fascicled in the axils of the upper leaves, few, 4 or 5 lines long. Calyx 3 lines long, with 4 narrow and acute teeth, or somewhat 2-cleft. Corolla white; its tube nearly half an

inch long, cylindrical; the lobes ovate, spreading, their margins very strongly induplicate and the sinuses plaited, not half the length of the tube. ~~Style~~ Ovary nearly included, almost 2 lines long. The forming fruit enclosed in the calyx, which is nearly conformed to it and scarcely accrescent.

Sp. Nov.)

2. Nothoestrum longifolium,

N. glabrum; foliis oblongo-lanceolatis oblongisve basi attenuatis; pedunculis solitariis; calyce obtuse 2-4-dentato longiusculo ^(immatura) campanulato; bacca elongato-oblonga.

Hab. Oahu, Sandwich Island,

on the mountains behind Honolulu, at the elevation of 1500 feet.

● Leaves 4 to 7 inches long, and about an inch and a half wide, thin and membranaceous, often with a blunt acumination. Pedicels 6 to 9 lines long. Corolla 4, not seen. Immature seed somewhat reniform, the testa reticulated.

3. Nothocestrum breviflorum. Sp. Nov.

N. arboreum, fere glabrum; foliis anguste oblongis ellipticis; corolla tubo calycem 2-4-lobum vix superante.

Hab. Hawaii, Sandwich Island, "between the Great Crater and the upper base of Mouna Kea; rare."

This is recorded as "a tree,
20 feet high, with the trunk 5
inches in diameter, and the wood
● greenish; habit of Solanum viridis;
the flowers greenish, but small."
Branchlets stout. Leaves $2\frac{1}{2}$ to
4 inches long, an inch or more
in width, mostly obtuse at both
ends, rather coriaceous in tex-
ture, the primary veins 9 or 10
pairs, ~~rather~~ somewhat conspicuous,
almost transverse. Calyx $4\frac{1}{2}$
lines long, glabrous, 4-nerved,
with broad and rather deep tooth
or lobes. Corolla nearly as in
N. latifolium, but shorter, only
the outside of the lobes minutely
~~silky~~ silky. Anthers slightly
protruding from the throat of the
corolla. Fruit not seen.

Ord. Scrophulariaceae.

The collection in this order affords ^{only a single new species} ~~nothing wholly new~~ and few ~~little~~ of much interest. The following need only be ~~enumerated~~ ^{mentioned}.

(from Madeira)
Linaria spuria, Mill. } and L.
Brunneri, Benth., from St. Jago,
Cape de Verde Islands.

Scrophularia scorodoria, Linn. and
S. racemosa, Linn., from Madeira.

Chaenostoma hispidum, Benth., picked
up at Cape Town.

Lindenbergia philippensis, Benth.,
at Manilla.

Beyrichia ocyroides, Cham. &
Schlect., at Rio Janeiro.

Stemodia trifoliata, Reich. at
Rio, and S. chilensis, Benth. at
Valparaiso.

Curanga amara, Juss., at Cal-
dera, Philippine Islands.

● Torenia parviflora, ~~from~~ ^{at} Rio
Lanciro; an Indian species now
naturalized in South America.

Bonnaya grandiflora, Sprung.,
at Manila.

Sipthoropia peregrina, Linn., ~~and~~
Digitalis purpurea, Linn., ~~at Madeira~~,
and Veronica Nagatis, Linn., at
Madeira.

Striga orbanchoides, Benth.,
at St. Jago, Cape de Verde Island,
on roots of Physalis.

Harveya Capensis, Hook., at
the Cape of Good Hope.

Euphrasia speciosa, R. Br., at
Sydney, New South Wales.

Euphrasia scabra, R. Br., the variety
with pinnatifid leaves, E. arguta, R. Br.,
from New South Wales.

Ord. Scrophulariaceae.

The collection in this order
~~presents~~ affords nothing new, and
or of any special interest.

1. Schwenkia, Linn.

1. Schwenkia divaricata, Benth. in ^{db.} ~~db.~~

Hab. Brazil, in the vicinity of Rio
Janeiro, where it was collected by
Martius and Gardner.

2. Browallia, Linn.

1. Browallia grandiflora, Graham.

2. Browallia peduncularis, Benth. in ^{db.} ~~db.~~

Hab. Peru, in the vicinity of Lima
and Obrajillo in the valley of Santa.

2. Brunfelsia, Swartz.

1. Brunfelsia capitata, Benth. in ^{db.} ~~db.~~

2. Brunfelsia ramosissima, Benth. l. c.

3. Brunfelsia Stoebeana, Benth. l. c.

Stat. Brazil, in the Organ
mountains near Rio. Ornament-
tal ~~plants~~ shrubs; two of them
● have already been figured, as
species of Franciscea.

3. Schizanthus, Ruiz & Pav.

1. Schizanthus Hookeri, Gillies.

Stat. Chili; Andes above San-
tiago; common; and well known
also in ~~the~~ the gardens.

4. Calceolaria, Linn.

1. Calceolaria scabiosifolia, Sims.
2. Calceolaria glandulosa, Poepp.
3. Calceolaria petiolaris^a, Cav.
4. Calceolaria integrifolia, Murr.
5. Calceolaria viscosissima, Lindl.

Hab. Chile; near Valparaiso or Santiago. Of the third species, above enumerated, every author but Sprengel has written the name petiolaris, which makes a decided misnomer, whereas the name petiolaris of Cavendish is characteristic of the lower leaves. One result of the error has been the introduction of two needless synonyms, C. floribunda, Lindl., and C. connata, Hook.

6. Calceolaria chelidonioides, H.B.K.

7. Calceolaria pinnata, Linn.

8. Calceolaria lobata, Cav.

Hab. Peru; between Lima and Obrajillo; the last named above Obrajillo.

9. Calceolaria verticillata, Ruiz & Pav.

Hab. Peru, in the vicinity of Obrajillo. - The ^{species of the} Verticillata described by Ruiz and Pavon and by Cavendish,

are not well discriminated and are probably to be reduced.

● 10. Calceolaria trifida, Ruiz & Pav.

Hab. Peru, at Obrajillo. To this, from the characters should belong not only C. glauca, Ruiz & Pav., but also C. terniflora, Cav.; but all, with C. angustiflora, Ruiz & Pav., may be forms of C. verticillata.

11. Calceolaria scabra, Ruiz & Pav.

Hab. Peru, in the valley of Cuzco, at Baños, ~~Balleri~~ ^{Balleri} Is. Bulluñi, Is.

12. Calceolaria bicolor, Ruiz & Pav.

Hab. Peru; "abounding in the environs of Obrajillo; corolla partly

yellow and partly white"; as figured
in the Botanical Magazine.

● 13. Calceolaria deflexa, Ruiz & ^{Pav.}

Stat. Peru; in the valley of
Canta, at ~~St~~ Baños, &c.

14. Calceolaria bartziefolia, Wedd.

Stat. Andes of Peru above Baños.
Suffrutescent, a span or so high.
So appropriate is the specific
name of this species that we
had so called it long before
the appearance of the second vol-
ume of Weddell's Chloris Andina,
in which his C. bartziefolia of
Bolivian Andes is described.

Judging from the published
character, our plant is probably

of the same species.

15. Calceolaria Matthewsii, Benth.

Hab. High Andes of Peru,
near Casa Barcha. Records per-
fectly with the plant of Matthews.

5. Alouzoa, Ruiz & Pav.

1. Alouzoa linearis, Ruiz & Pav.
2. Alouzoa incisefolia, Ruiz & Pav.
3. Alouzoa procumbens, Ruiz & Pav. }

Hab. Peru, at Obrajillo, except
the second, which was collected at
Chili in the vicinity of Valparaiso.
The third is hardly a form of A. can-
lialata.

6. Alectra, Thunb.

1. Alectra Brasiliensis, Benth.

Stat. Brazil, near Rio Janeiro;
a common South American plant.

7. Mimulus, Linn.

1. Mimulus luteus, Linn.

2. Mimulus parviflorus, Lindl.

Stat. ~~Andes of~~ Chili near Santi-
ago; a hairy form of the latter. Also
a smooth form at Obrajillo, Peru.

8. Limnophila, R. Br.

1. Limnophila Menthastrum, Benth.

2. Limnophila serrata, Gardich.

Stat. ~~Taije Islands; and the latter~~

Stat. South-Sea Islands: the former at the Feejee and Samoan Islands; the latter at the Feejee and Society Islands.

9. Sterpestis, Gartn.

1. Sterpestis stricta, Schröd.

2. Sterpestis lanigera, Cham. & Schlecht.

Stat. Brazil, in the vicinity of Rio Janeiro; where they are common plants.

3. Sterpestis Monniera, H.B.K.

Stat. Rio Janeiro, Brazil, Callao, Peru. Sandwich Islands. Manilla. Widely distributed over the warmer parts of the world.

10. Gratiola, Lin.

1. Gratiola Peruviana, Lin.

Stat. Peru, in the vicinity of Obajillo. Apparently not met with in Chili or North Patagonia, where it is often collected.

2. Gratiola pedunculata, R. Br.

3. Gratiola pubescens, R. Br.

Stat. New South Wales, at Hunter's River and Wollongong. The former much resembling our G. Virginiana; the latter close to G. Peruviana.

11. Nandellia, Lin.

1. Nandellia crustacea, Benth.

Stat. Leejee, Society, Samoa, and

Philippine Islands; also Rio
Janeiro, where it is ^{an} introduced plant.

2. Nandellia scabra, Benth.

Stat. Philippine Islands, near
Manilla; an imperfect specimen.

12. Limosella, Linn.

1. Limosella tenuifolia, Nutt.

Stat. Chili, in the vicinity of
Valparaiso. ~~also seen at Rio Negro, North Patagonia.~~ - Upon all the evidence
it can hardly be doubted that the
plant of the ~~American~~ New World
is a variety of L. aquatica; but I
have no American specimen with
such leaves as those of the European
plant.

13. Capraria, Lin.

1. Capraria Peruviana, Tenill.

Stat. Peru, in the exiccated bed
of the Rimac at Lima.

2. Capraria calycina, Sp. Nov.

C. glabra, humilis; foliis lanceolatis
sen linearibus paucidentatis, den-
tibus grossis divaricatis ~~prosertim~~
plennique ^{vixus} ~~supra~~ basin; floribus
in axillis solitariis; calycis lacini-
is foliaceis ~~rarius~~ ~~de~~ pedunculo
aequilongis sen longioribus corollam
adequantibus capsulam superan-
tibus; staminibus 4; stigmati emar-
ginato.

Stat. Hunter's River, New South
Wales.

(with Mitrasacme polymorpha, &c.).

This was found among specimens of the Australian Collection. The only ground of suspicion as to the habitat is that all the ~~known~~ ^{before known} species are American. The scanty specimens belong to a plant about a foot high; the leaves in the principal specimen 2 to 3½ inches long and 3 or 4 lines wide, mostly entire except towards the base, where 3 or 4 sharp and salient laciniiform teeth usually beset each side; but a separate fragment ~~has~~ exhibits shorter and broader leaves more like those of C. biflora. From this species, moreover, it differs in its solitary and short-peduncled flowers, ^{and its} ~~with the~~ calyx twice the size, its divisions lanceolate, foliaceous, somewhat accrescent (in flower 4 lines, in fruit half an inch long), sometimes a

little denticulate. Corolla between
campanulate and funnelform; the
limb about equally 5-cleft,
● the two superior lobes rather broader,
all bearded within, as well as
the throat. Stamens didynamous.
Style filiform; stigma thickened,
emarginate. Capsule (immature)
like that of C. biflora.

14. Scypharia, Linn.

1. Scypharia dulcis, Linn.

Hab. Brazil, at Rio Janeiro,
Peru, at Callao. Luzon, at
Manilla. An American plant
now found in almost every warm
region

15. Veronica, Linm.

● 1. Veronica elliptica, Forst.

Hab. Orange Harbour, Tuegia, and
Lord Auckland Islands. "Growing along
the sea-shore, somewhat rare: a highly
ornamental shrub."

2. Veronica odora, Hook. f.

Hab. Lord Auckland Islands: collected
without flowers or fruit.

3. Veronica salicifolia, Forst.

4. Veronica ligustriifolia, A. Cunn.

5. Veronica diosmaefolia, A. Cunn.

6. Veronica elongata, Benth.

Hab. Bay of Islands, New Zealand.
All the above species are well charac-

derived by Dr. Stoker.

7. Veronica plebeia, K. Br.

Stat. New South Wales, at Sydney,
V.S.

16. Gurisia, Commers.

1. Gurisia Magellanica, Juss.
2. Gurisia breviflora, Benth.

Stat. Orange Harbour, Zuegia;
the former in clefts of rocks on the
coast; the latter on the mountains.

17. Gerardia, Linn.

1. Gerardia communis, Cham. & Schlecht.

Stat. Rio Negro, North Patagonia. An
insignificant species of this fine genus. None of the
Brazilian or Peruvian species occur in the

collection.

18. Bastilleja, Linm.f.

1. Bastilleja fissifolia, Linm.f. var.
pumila, Medd.

(above Baños, and
Itab. Andes of Peru,) in the
environs of Casa Blanca and Alpa-
marca.

The specimens are mostly of
the high alpine variety figured by
Medd as B. pumila (B. nubi-
gena B.? pumila, Benth. in Db.),
which in the latter-press he has
reduced, along with five or six other
supposed species, to the polymorphous
B. fissifolia of the younger Lin-
naeus. A specimen from Alpa-
marca, only two inches high, has
very short and proportionally broad, less
lobed leaves.

19. Orthocarpus, Nutt.

1. Orthocarpus australis, Benth.

● Hab. Peru, at and above Obrajillo. With it an imperfect specimen of a plant, more like Castilleja, but not determinable.

20. Bartsia, Lin.

1. Bartsia subinclusa, Benth.

Hab. Andes of Peru above Obrajillo.

The specimens, all referable to the same species, will include B. elongata, Wedd. & Schl. And., and this variety pusilla. The corolla is either smoothish or ~~just~~ strongly pubescent on the galea and is more or less exserted. The anthers ~~are~~ bear a tuft of very long but not very

numerous hairs. It is probably the B. Peruviana of Walpers also (the oldest name) in the description of which the calyx is perhaps exaggerated.

2. Bartsia Meyeniana, Benth.?

Hab. Andes of Peru, ~~in the valley of Cuzco~~, above Baños,

This very well accords with this species as figured by Meddell, except that the corollas are perhaps a little larger, and the anthers are not at all bearded. The herbage is, as Meddell remarks, extremely viscous; indeed the lobes of the calyx, &c. are very strongly and densely glandular-hairy.

It may here be noted that B. pumila and B. orthocarpiflora, Benth. are wrongly credited to the Lintensian

Andes and to Jameson's collection.
They are both from the Peruvian
Andes, and were collected and sent to
• Sir Wm Hooker by Mr. McLean.

3. Bartsia densiflora, Benth.

Stat. Andes of Peru, near Baños,

The specimens, which are cer-
tainly of this species, ^(in some cases) have the spike
even more loosely-flowered than
those of Gay mentioned by Wed-
dell; so that the name is far
from characteristic.

Ord. Myoporinae.

● The group is probably to be hereafter included in Verbenaceae, along with Selaginella and Phryma, all together forming one well-marked and easily recognizable order.

Nesogenes, A. B. B., founded on an Oceanic plant, which was doubtfully referred to Myoporum, but has nothing in common with that genus, is here referred to Verbenaceae.

In his ordinal character of Myoporaceae, Alphonse De Candolle (Prodr. 11, p. 701) states that the fifth stamens is always and wholly absent, "absque vestigio quinti superioris," - in this overlooking or disregarding Brown's character, "quandoque ru-

diamentum quinti, varo pollini =
feri" (Prov. Fl. Nov. Hill. p. 514).

It may be clearly made out that
● Brown here refers to ~~the~~ genus
Myoporum, and I suspect that
he had ~~the~~^a) Sandwich Island rep-
resentative of this group in view,
in which the stamens are really
isomous with the lobes of the
corolla in all the flowers I am
able to examine.

1. Myoporum, Banks & Soland.

1. Myoporus latum, Forst.

Stat. New Zealand, at the
Bay of Islands. - Dr. Hooker's
~~remark~~ character "stamens
five" ~~under the~~ in the Flora
of New Zealand, under the genus.

is an evident Lappus perna,
The putamen in the fruits exam-
ined is three-celled and three
● seeded; the ovary, as in the
single one examined by De-
Candolle, trilocular, and moreover
with no ~~appearance~~ vestige of a
fourth cell, and with only a
single ovule in each cell.
This militates against De Candolle's
primary division of the genera
founded on the number of ovules
to each carpel, and also against
~~the~~ ^{his} genus Polycœlium (Penta-
cœlium, Rucc.)

2. Myosorum montanum, R. Br.

Stat. New South Wales, at
Hunter's River. In fruit only.

3. Myoporum (Polycælium) Sandwicense.

M. glabrum; foliis oblongo-lanceo-
latis acutissime vel tenuiter
acuminatis integerrimis, in-
ferioribusve nunc pl. m. serru-
latis; fasciculis 3-8-floris; pedi-
cellis petiolum subæquantibus;
corolla late campanulata ad
medium usque 5-fida; stamini-
bus 5; drupa 4-8-loculari. Ludit
floribus hexameris hexandris, foliis
2-3-pollicaribus angustis vel 3-5-pollicaribus multo
latioribus.

Myoporum tuncifolium, Hook. &
Arn. Bot. Beech. Voy. p. 93,
vix Hart. et R. Br.

Polycælium Sandwicense, A. DC.
Prodr. 11, p. 706.

Prinastrum cauliflorum, Nutt. in
Hort. Hook.

14th, Sandrich Island, Menzies,
Beechey, Gaudichaud, Antall, Dryas,
Antall, Kerry (no. 461, 462, 463). &c.

● In our collection the narrow-leaved form from Oahu and near the coast on Hawaii, broad-leaved forms from Hawaii, ascending Mouna Roa and ^{especially} Mouna Kea ~~is to~~ into the pastoral region at the elevation of 7000 or 7200 feet; and ^{an} intermediate form from the mountains of Kailai.

One form is recorded as "a tree fifty feet high" (but nothing is said of its wood, which, according to Bart. ^{on the authority of Menzies,} Beechey, has the fragrance of sandal-wood and is exported ^{as such} to China), another is said to be "a decumbent shrub." All appear to be forms of one variable species. The narrowest leaves are 4 to 6 lines wide, much attenuated at each end; the ~~largest~~ largest, from an inch to fully an inch and a half wide, much less tapering at the apex,

but tipped, like the others, with a narrow, cuspidate acumination, some of the lower leaves in all the forms more or less serrulate with rather sparse appressed teeth, ~~Pedicels~~ either almost veinless or obscurely veined. Pedicels 3 to 5 lines long, acutely angled. Sepals ovate-lanceolate, acute or acuminate, about the length of the tube of the corolla. Corolla (^{purplish} ~~white~~) very open-campanulate, cleft to or beyond the middle, regular, the lobes broadly ovate or roundish, nearly alike, more or less pellucid punctate. The corolla is only 3 or 4 lines long, with a breadth when expanded of about 5 lines. Stamens in all the flowers examined as many as the lobes of the corolla (five, or occasionally six), all antheriferous and nearly alike, two of ~~them~~ them usually a

larger or with larger anthers than the rest. The whole fabric of the blossom is that of Mysoporum,

● except the ovary, which is from 5-celled to 8-celled, with a single ^{anatropous} ovule suspended from the summit of each cell. Drupe ^{black} of the size of a pea, pointed with the base of the style; Sarcocarp rather abundant; Putamen bony, at the base often with as many angles as there are cells; of these sometimes the whole number, as many as 7 or 8, remain in the fruit, while sometimes only two, three, or four are perfected. Seed cylindraceous or cylindrical; albumen thin or sometimes ~~was~~ wanting.

Embryo cylindrical, the cotyledons ~~about~~ ~~as long~~ as long as the radicle,

The interesting fact that this species has the stamens isomorphic with the lobes of the corolla had escaped the notice of preceding observers, except perhaps of ~~Mr.~~ Brown, who (as remarked above) was aware that ^{(this was the case in} some Myosporum, probably in this. This character along with the increase in the ~~cells~~ number of the cells of the ovary, would fully warrant the establishment of a separate genus. But the ~~fifth~~ fifth stamen is wanting in Myosporum (Pentacœlium) boottoides of Japan, and in the allied M. chinense, and the former species sometimes has the ovary only 4-celled (unless, indeed, there is a lappus pence in Ruccarini's detailed description; while, on the other hand one of the original species of Myosporum has a trilocular and triovulate ~~ovary~~

ovary. The habit being wholly the same, and other distinctions ~~are~~ altogether wanting, I must conclude that Pentacœlium, Rucc. ~~for~~, and Polycœlium (the latter restricted to the Sandwichian species, and characterized accordingly) are better regarded as mere sections of Myosorum.

Ord. Selaginæ.

Selago corymbosa, Linn., S. fasciculata, Linn., and S. spuria, Linn., three common species, were picked up at the Cape of Good Hope, in the vicinity of Cape Town.

Agnes M. A. A.

12th Nov 1890

Dear Mr. A. A.

I have just received your letter of the 11th inst.

Ord.

Gesneriaceae.

1. Gesneria, Linna., Mart.

1. Gesneria (Isoloma) Douglasii, ^{Lin. St.}

Gesneria Douglasii, Lin. St. Bot. Rep.

t. 1110; Lodd. Bot. Cab. 1939; Mart.

Nov. Gen. Sp. 3, t. 215 (G. maculata
in ic.); Hook. Bot. Mag. t. 3612.

G. verticillata, Hook. Bot. Mag. t.
2776, non Cav.

Stat. Brazil; in the Organ Mountains near Rio Janeiro. The specimen agreeing with the figure by Martius in exhibiting only opposite leaves; the uppermost pair reduced to small bracts, so that the inflorescence is long-peduncled and naked.

2. Gesneria (Isoloma) salviaefolia, Gardn.

Gesneria salviaefolia, Gardn. in Lond.
Jour. Bot. 4, p. 129.

Stat. Brazil, in the vicinity of
Rio Janeiro. A fruiting specimen.

3. Gesneria (Corytholoma) latifolia, Mart.

Stat. Brazil, near Rio Janeiro;
the variety Gaudichandi, DC.

4. Gesneria (Corytholoma) bulbosa, Ker.

Stat. Brazil, on the Corcovado
and Organ Mountains; just the
form figured in Bot. Mag., t. 3041;
also a very large leaved, tomentose-

Hirsute variety, nearly the t. 3886,
Bot. Mag. (G. bulbosa S. Merckii,
Klotzsch, Walp. Repert. 2, p. 717),
but the pedicels, calyx, &c. still
more hairy, - apparently hardly
of this polymorphous species.

2. Gloxinia, L'Her.

1. Gloxinia (Simningia) Stelleri, Mart.

Hab. Brazil, in the vicinity of
Rio Janeiro.

The lower surface of the leaves
and the stem^{st.} are strigulose-pubescent,
and the lobes of the ample calyx
are often toothed or denticulate.

3, Besleria, Plum.

1. Besleria umbrosa, Mart.

Stub. Brazil, in the vicinity of
Rio Janeiro.

4. Rhabdthamnus, A. Cunn.

1. Rhabdthamnus Solandri, A. Cunn.

Stub. Bay of Islands, New Zealand.
~~Rhabdthamnus~~
The foliage exceedingly resembling that of
Carpodetus serratus.

5. Cyrtandra, Forst.

* Tahitenses et Samoenses.

1. Cyrtandra biflora, Forst.

C. arborea, pube purpurea crocea
nascentium partium mox delapsa
glaberrima; foliis ^(3-5-pollicaribus) ovato-~~seu~~
~~longo~~ lanceolato-oblongis
utrinque subacutis levibus
subtus pallidis crenato-subser-
ratis vel subintegerrimis; pedun-
culis petiolum paullo ^{excedentibus} ~~superan-~~
~~tibus~~ involucri albidum 2-
caducum ²⁻ 3-phyllum caducum
^{que} pedicellos ²⁻ 3 unifloros gerenti-
bus; calycis quinquefidi lobis
lato-lanceolatis sensim acumi-
natis; corolla bipollicari; fructu
oblongo. Folia ^{adulte} ~~sicca~~ in secco

Chartacea, veris ~~in~~ pagina infer-
ioris albida perspicua at vis
prominulis.

Cyrtandra biflora, J. R. Forst.
Char. Gen. p. 6, t. 3; Vahl,
Symb. 2, p. 1; Guillem. Zeph.
Tait. p. 41, ubi descr. Forst.
Besleria biflora, G. Forst. Fl.
Ins. Austr. p. 43. 224.
Cyrtandra glabra, Gaertn. Fruct. 3, p. 234, t.

Itab. Tahiti, Society Island,
and apparently also from ^{Outrigger} the Samo-
an Islands, unless there has been
transposition of specimens.

The above character is made
up from ^(imperfect) specimens without flowers,
from notes upon Forster's specimen
in the British Museum, ~~and~~ from
Forster's figure, and from his detailed
description ~~of~~ printed in the Zephy-
ritis Taitensis. Vahl evidently

had an authentic specimen
in view. I do not cite Hooker
and Knott, Bot. Beechey, p. 67,
● because "calyce pubescenti-to-
mentoso" is there introduced into
the character, nor DeCandolle, for
a similar reason. Both must have
one of the following Tahitian species
more or less in view. Fuller ma-
terials are needed to determine
whether the ~~following~~ next species
is sufficiently distinct from C.
biflora, or whether the Samoan
specimens ^(above mentioned) really belong to the
latter.

(Hab. Sp. Mv. ~~Hab.~~)

2. Cyrtandra pulchella, Rich in

● C. "pruticosa, tripedalis," glaberrima; foliis oblongo-lanceolatis (5-9-pollicaribus) subfalcatis basi subcuneata ~~in~~ ⁱⁿaequilateralibus versus apicem repando-crenatis supra nitidis subtus pallidis; pedunculis folio paullo brevioribus 7-9-floris; "bracteis latis" caudicis; Calycis coriacei breviter ^{(in)aequaliter} quinquefidi lobis ovatis obtusis; corolla bipollicari; ovario elongato.

Hab. Tutuila, Samoan Islands, on the mountain ridge, at the elevation of 1800 feet.

This is, of all the species I know most allied to the original C. biflora; but the characters appear nearly to

distinguish it. Peduncles 4 or 5 inches long up to the bifurcation much thicker than the petioles (which are only an inch long) and inclined to become subclavate and fistulous; pedicels, at least the alar ones, about an inch long. Calyx about 8 lines long, of thick texture, glabrous, two of its broad and blunt lobes half the length of the campanulate tube, the others with sinuses only half as deep. Corolla in size and shape agreeing very well with Foster's figure of that of *C. biflora*, as also the stamens. Anthers longer than the free portion of the filament, the cells equal and parallel. Ovary glabrous, the forming fruit siliquaform or lanceolate.

3. Cyrtandra induta, sp. nov.

C. arborescens; foliis inequalibus
(altero 5-8, altero 8-14-pollicari
~~ibus~~) ovatis seu ovali-oblongis
acuminatis dentatis basi in-
aequalatera sepius acutis pilis
pluriseptatis superius hirsutis
subtus cum petiolis pedun-
culis ramisque junioribus mol-
liter villosis; pedunculis peti-
olo aequilongis plurifloris; cal-
yce infundibuliformi pubes-
cente, lobis lanceolatis acu-
minatis ^{tubo} 2-3-plo brevioribus;
(corolla bipollicari;
fructu immatureo elongato-ob-
longo basi attenuato quasi
stipitato).

Hbk. & Kun. ? &

Cyrtandra biflora [Dc. Prodr.
9, p. 280, pro parte ?

Stat. Tahiti, in the moun-
tains, coll. by Prof. Dana, at the
elevation of 2000 or 3000 feet. A
● ~~somewhat glabrate~~ less pubes-
cent state was collected by M.
Pancher, said to be very common
in moist valleys; and Moerenhout's
plant seen by DeCandolle may
be the same.

This species does not appear
in Dr. Pickering's list; ^{as} the two he
mentions as "possibly distinct" seem-
ingly belong to the following. The
specimen of our collection has the
ample and thinish leaves very
downy; that of Pancher preserves
the down of the lower surface, but
it is more appressed and implexed, or
in other words tomentose, and ~~per-~~
nigrescens instead of fulvous. The
calyx ~~when~~ full grown is almost
an inch and a half long, acute

at the base, gradually widening upwards, the sinus of the two ~~lower lobes~~ anterior lobes as usual much deeper than of the three posterior ones, the former lobes scarcely half, ~~the~~ and the latter only a quarter of the length of the tube. Corolla in no fit state for investigation, but as large as in C. biflora, and glabrous. The forming fruit nearly an inch and a half long, including the attenuate base.

The species appears to be a very well-marked one, even if the pubescence be variable.

4 Cyrtandra Tahitensis, Nich in
Hub. Sp. Nov.

C. fruticosa, "8-10-pedalis", pu-
berula vel glabella, partibus
novellis sericeo pube minuta
sericea subferrugineis; foliis
subaequalibus ovatis seu ovato-
oblongis acutis vel acumina-
tis subserratis (6-12-pollicaribus),
adultis supra hirtulo scabri-
dis subtus ad costas, ^{prominulas} venulas =
que puberulis; pedunculis peti-
olo 3-4-plo longioribus plu-
rifloris; calyce campanulato ^{brevi}
ad medium 5-fido, lobis ovato-acu-
minatis; corolla sesquipollicari,
tubo gracili; fructu immature
elongato-oblongo haud basi
attenuato.

Hub. Tahiti, in the forest.
One specimen is ticketed Samoa,

perhaps by some transposition.

~~This~~

Although the materials of the several specimens are rather incomplete and fragmentary, the species is evidently ~~wholly~~ quite distinct from the preceding and from C. biflora. It is one of those species which by the elongated ~~berry~~ fruit (bacca siliquaeformis) would seem to approach Blume's Whitia; but the cells of the anther are strictly parallel. The leaves resemble those of the following species, but are scarcely whitish underneath. Petioles, ^{slender,} an inch or an inch and a half long. Peduncles often thickish, 3 to 6 inches long; ~~app~~ the flowers apparently rather numerous, at least the cymes are sometimes three or four times dichot-

mons. Corolla white, its tube
an inch long, narrow and
cylindrical. The forming fruit
an inch long, narrow, the
limb about an inch in diameter,
stigma 2-lobed. Ovary glabrous.

5. Cyrtandra Samoensis, Sp. Nov.

C. frutescens, novellis partibus ^(minutim) fer-
rugineo-vel fulvo-pubescenti-
bus; foliis ovatis ovalibusque (6-
12-pollicaribus) aequalibus utrin-
que ^{sapius} acutis vel subacuminatis sub-
dentatis vel fere integerrimis, adul-
tis supra glabratis subtus albidis
ad costas ^{prominulas} venulasque pubescentibus,
petiolo (sesqui-quadrupollicari)
cymis plurifloris brevipedunculatis
bis ~~terre~~ terre longioribus;

calyce tenuiter pubescente a
basi 5-(-6-) partito, segmentis
lato-lanceolatis corolla semipolli-
cari paullo brevior; fructu brevi-
ter ovoido.

Hub. Tutuil^{Savaii,}a and Manua,
of the Samoan or Navigators'
Islands, common on the coast. A
specimen is ticketed Tahiti, but
probably by a transposition of
labels.

This occurs in the collection under
various forms, which, however, all
accord in their essential char-
acters. The pubescence is all fine
and appressed. The leaves, as usual,
are more or less oblique or inequilat-
eral at the base, sometimes rather
strongly so; some are quite entire,
others irregularly more or less serrate.
Peduncles half an inch to an inch

in length; the cyme also short
(an inch long), corymbose or umbel-
like; 9-15-flowered; pedicels slender,
● ~~Flowers~~ softly ferruginous - or
fulvous-pubescent, as is the rest of
the inflorescence. Calyx 4 or 5 lines
long, about one third shorter than
the corolla, sometimes 6-parted, di-
vided to the very base. Corolla with
a rather broad tube and short limb, ^{glabrous.}
Anthers, 5, of the genus. Rudiments
of three stamens present as small
sterile filaments. Stigma 2-lobed.
Ovary glabrous. Immature fruit
short-oval, half an inch or less
in length.

This should be compared with C. lati-
folia, Benth. - a Feejee species not yet
identified in later collections; but that has
the peduncles 2 or 3 inches, the petiole only
an inch long, and is more tomentose.
Forbes C. cymosa also has peduncles larger than the
petiole.

b. Cyrtandra Richii, sp. nov.

C. ~~crass~~ ^{crasso} glabra; caule fruticoso
● 10-15-pedali; foliis amplis (1-2-
pedalibus) membranaceis lanceo-
lato-oblongis basi attenuatis sub-
integerrimis utrinque viridibus;
cymis subsessilibus fasciculiformi-
bus; ~~corolla viridula~~ ^{petiolo}
brevioribus; "corolla viridula" ^{suburceolata} fructu
immatureo ovoido.

~~Har.~~ ³ labiosa;

Har. Savaii, one of the Samo-
an Islands, in the deep interior
forest.

This is recorded as "an upright,
thick-stemmed shrub, ten to fifteen
feet high," with long leaves: the
stout petioles are 3 or 4 inches long,
more than twice the length of the
fasciculate inflorescence in ~~to~~

their axils in the solitary specimen. The corollas which are said to be "rather small, greenish, somewhat urceolate, if preserved collected, are not preserved, even the calyx having fallen from the fructified ovaries." ^{"Perfect specimens too."} The fruit is evidently ovoid.

7. Cyrtandra labiosa, sp. nov.

C. glabra, precedenti affinis, sed foliis lato-lanceolatis multo
minoribus (6-7-pollicaribus);
"floribus majoribus; corolla alba
eximie bilabiata."

Hab. Savaii, one of the Samoan Islands.

Foliage and vestiges of corollas remain in the collection. The corolla

appears to ~~have been~~ be short
and broad, deeply bilabiate, the
lips twice or thrice the length of
the tube, the upper arching, the
lower spreading.

8. Cyrtandra pogonantha, Sp. Nov.

C. frutescens; foliis amplis
(pedulibus) utrinque acutis
vel basi attenuatis, subintegerrimis ^{viridibus} glabratissimis, membranaceis,
nascentibus ferrugineo-pubescentibus; cymis petiolo brevioribus
involueratis brevi-pedunculatis
hirsutis; alabastris rostrato-acuminatis; corolla tubulosa breviter
bilabiata extus pilis longis
pluriseptatis insigniter barbata.

Hab. Savaii, one of the Samoan Islands, in the deep interior forest.

● Incomplete as are the materials it is easy to characterize this remarkable species and to confirm Dr. Pickering's notes upon the fresh plant. The nascent parts are ferruginous-hairy or pubescent, but the adult leaves are glabrous, except some of the pubescence remaining on the midrib and veins, and some scattered slender hairs on the upper surface. Petioles $1\frac{1}{2}$ or 2 inches long. "Flowers hairy, enclosed in a white, hairy involucre". The involucre appears to consist of two or three ovate-lanceolate bracts which are somewhat connate at the base, externally glabrate, internally perhaps whitish, and ^{hirsute} ~~hairy~~, like the pedicels and calyx, with

rusty hairs. Calyx in the bud
pursiform and rostrate, half an
inch or more in length, in anther-
●sis apparently splitting down one side
to about the middle. Corolla
an inch long, tubular, scarcely
ampliate at the throat, bilabiate,
the five lobes rather small, ovate
and perhaps rather acute, their exterior
face and most of the tube conspic-
uously bearded with very long and
stiff, tapering, many-jointed, whi-
tish hairs. Stamens 5, of the
genus. Anthers 2, exerted from
the throat. Fruit unknown.

* * Vitienses.

9. Cyrtandra Milnei, Seem.

C. caule crasso; ramis petiolis
costaque foliorum ~~ferme~~ ^{rufo-}
villosissimis, pilis longis multi-
septatis superne, attenuatis; fo-
liis ^(5-8-pulicantibus) ~~amplex~~ ovalibus utrinque
acutis vel acuminatis ser-
vatis pilosis; pedunculis brevissi-
mis plurifloris; bracteis amplis; caly-
ce pedicello longiore ^{peraequaliter} tubuloso) 5-
dentato) ^{persistente} fructus ovatum in-
cludente.

Cyrtandra Milnei, Seem. in
Bonplandia, 9, p. 257, ab 29.
char.

Hab. Ovalau, Feejee Islands, ac-
cording to Dr. Pickering's memorandum.

Sandalwood Bay, according to Mr. Rich's ticket.

This well-characterized species was collected only in fruit. But as Dr. Seemann supplied me with a leaf only, his materials are perhaps ~~no more~~ not better than ours. In his, the shaggy ferrugineous hairs are ^{somewhat} ~~rather~~ more rigid than in ours, ~~or as it~~ The leaves appear to be equal in the pairs: petioles 3 or 4 inches long; the blade of twice that length and conspicuously veiny, hairy on both sides, especially on the veins. Corolla, &c. not seen. Calyx after flowering 7 to 10 lines long, cylindrical or tubular-cyathiform, glabrate, longer than the included fruit.

Sw.)

10. Cyrtandra dolichocarpa, Sp.)

- C. frutescens; ramis gracilibus, junioribus cum petiolis pedunculisque (unifloris?) pilis longis rufescentibus ~~pluri-~~ multiseptatis (modo C. Milnei ^{subaequalibus}) barbatis; foliis lanceo-lato-oblongis acuminatis denticulatis supra hispidulis ^{subtus} ~~supra~~ breviter fulvo-pubescentibus; calyce longe tubuloso puctu cylindrico siliquaeformi (sesqui-bipollicari) acuto $\frac{1}{3}$ breviora sero deciduo.

Hab. Feejee Islands, at Sandwood or Mbuu Bay, Vanalevu.

A solitary specimen, in
fruit only. It is evidently allied
to the preceding species (of which also
● the corolla is unknown to us), the
leaves being similar though nar-
rower, smaller, and less shaggy,
the long and many-jointed hairs
quite the same, and the ^{vestiges} ~~remains~~
of a still longer tubular calyx
(fully an inch in length)
still persist upon one side of one
fruit. The latter attains even an
inch and a half in ~~fruit~~ length,
while it is only 4 or 5 lines in diam-
eter. (which other species approach),
Excepting the elongation, it
^{seemingly} accords with that of other species
of *Cryptandra*, i.e. it is a ~~dry~~
corticate ^(and juicy) ~~and dry berry~~ probably
rather fleshy when fresh, and indehis-
cent. So that the anthers only
are left to distinguish ^{Blum's} Whitea.

11. Cyrtandra involucrata, ^{Seem. l.c.}

● Stat. Ovolau, Feejee Islands.

A single and very incomplete specimen, which ^{apparently} accords with ^{one of} Dr. Seemann's, no. 279, except that the ferruginous involueral bracts have fallen. The leaves are resemble those of the preceding species, except that there are no long shaggy hairs on the petioles, &c. The calyx is rostrate in the bud, the lobes subulate from a broad base, and about the length of the ovoid-campanulate tube. But as ~~the~~ the specimen from Dr. Seemann does not show the flower, nor mine the ^{short} fruit (nor either the corolla) I ~~have~~ am unable completely to identify them, nor safely to frame a character.

12. Cyrtandra anthropophagorum, ^{l.c.} Seem.

- C. frutescens, minutum fusco-pubescent; foliis oblongis acuminate sub serratis; pedunculis petiolo brevioribus paucifloris; pedicellis flore longioribus; calyce 5-fido, lobis subulato-lanceolatis corolla dimidio brevior^{ibus}; fructu ovato-oblongo.

Stat. Oralau, Feejee Islands.

The flower is described from scanty materials in our collection, the young fruit from that of Dr. Seemann. Leaves opposite and nearly similar, 3 to 5 inches long, minutely hairy above and tomentulose-pubescent beneath. Calyx 5-cleft quite to the middle, the

lobes spreading, Corolla half an inch long, straight, tubular-funnel form; the lobes short and spreading. Dr. Seemann's specimen is broader-leaved than ours; but the inflorescence, calyx, &c. are similar.

13. Cystandra Pritchardii, Seem. ^{l.c.}

Hab. Ovalau, Feejee Islands.

A glabrous species, of which Dr. Seemann's ^{materials} ~~specimens~~ are probably better than ours.

There are indications of as many species of Cystandra in the Feejees as are now known in the Sandwich Islands. Besides those above mentioned in the collection of the Exploring Expedition, Dr. Seemann enumerates his C. acutangula, C. Viti-

ensis, ~~C. ciliolata~~, C. coleoides,
and C. ciliata. As far as can be
judged from the imperfect materials
● in my possession, none of these ^{wholly} agrees
with one collected by Professor Harvey,
nor with the two species (C. caly-
cina and C. latifolia) already des-
cribed by Mr. Benthams from the
collection of Kinds. C. Calycina
is perhaps related to C. Nitensis of
Semann, which seems to have a
tubular calyx, like that of C.
Milnei.

~~Cystandrea Tahitensis et~~
~~Samouensis.~~

In the collection from Luzon,
in the mountains near Bantao, is
a specimen, too incomplete for deter-
mination, of what seems to be an
undescribed Cystandra, and also
of a Rhynchotecum; and from
the Majajai Mountains an As-
chynanthus in similar condition.

*** Sandwicensis, fructu brevi
in C. paludosa ellipsoideo.

14. Cyrtandra cordifolia, Gand.

C. villosissima; foliis rotundo-ovatis
cordatis, ^{acuminatis} argute dentatis supra
hirsutis subtus calycibusque
dense tomentoso-villosis sub-
incanis; pedunculis plurifloris;
calyce rotato ^{fer} angulato-quin-
quefido, ^{ferè equali} corollam ^{sub} æquantibus,
lobis late ovatis acuminatis;
ovario cum stylo brevissimo
villosa.

Cyrtandra cordifolia, Gand. Bot.
Voy. Freyc. p. 446, t. 56; Hook.
& Arn. Bot. Beech. p. 91; DC.
Prodr. 9, p. 284.

Hab. Sandwich Islands; on the
mountains behind Oahu, at the
elevation of about 1500 feet.

Stem pubescent. Branches
short, densely villous, as are the
petioles, peduncles, pedicels. Ls. with
long ^{and soft} widely spreading, somewhat
ferrugineous, multi-articulated
~~soft~~ hairs. Petioles 3 to 5 inches
long. Leaves 5 to 7 inches long,
abruptly acuminate, cordate with a
narrow, often closed sinus, finely
dentate with very narrow and sharp
teeth; densely fulvous-dun on un-
derneath. Peduncles 12 to 18 lines
long, ~~and~~ bearing a pair of fo-
liaceous bracts and an umbellate
cyme of from 3 to 9 flowers; the
shaggy pedicels about an inch
long. Calyx ^{fully} an inch in diam-
eter when ^{rotately} expanded, thin, very
villous on both surfaces. Corolla
9 lines long, the tube very woolly
outside towards the summit, the

short limb with five almost ~~equal~~
equal rounded lobes. Rudiments
of 3 sterile stamens present. Ovary
and young fruit ovoid, hairy,
pointed with a very short style,
which is articulated just below
the ~~tri~~^{bi}-lamellate stigma.

Gandichand's plate pretty
well represents this species, except
that the villous ~~down~~ shaggy pre-
sence is omitted, the leaves are
not large enough, nor the rotate calyx
expanded.

15. Cyrtandra platyphylla, Sp. Nov.

C. foliis rotundato-cordatis breve
acuminatis argute denticula-
tis supra hirsutulis subtus
canescenti-pubescentibus, costis
cum petiolis ramis calycibus-
que pube feruginea villosis;
pedunculis plurifloris; calyce
alte quinquefido inequaliter
quinquefido, lobis lato-lanceo-
latis corolla brevioribus; ovario
cum stilo gracili glaberrimo.

Hab. Hawaii, Sandwich Islands;
"in woods between Puna and Pahu-
kuli", Brackenridge.

This new species much re-
sembles the preceding, except in the
particulars indicated in the diagnosis.
The stem is said to be about 10 feet

high; the pubescence is similar but less shaggy and more ferrugineous; the leaves attain a greater amplitude, even to 8 or 9 inches in length and breadth, and are less deeply cordate; the lobes of the rather deeply cleft and not rotately expanded calyx are very much narrower (4 or 5 lines long, about a line and a half broad at their base); the corolla nearly an inch long, less hairy externally, with a rather distinctly bilabiate limb, the lobes larger; the ovoid-oblong ovary is perfectly glabrous, with a slender style as much as two lines in length above the articulation. Fertile ~~stamens~~ filaments longer than in *C. cordifolia*, strongly curved. Fruit globose.

16. Cyrtandra Pickeringii, sp. nov.

C. ferrugineo-villosa; foliis oblongo-
lanceolatis utrinque acumi-
natis subserulatis supra
minutis subtus (prater costas
villosas) canescenti-pubescenti-
bus; pedunculis 3-5-floris; calyce
crateriformi breviter subaequaliter
breviter 4-5-loba corolla brevior,
lobis late deltoideis.

Hab. Oahu, Sandwich Island,
on the mountains behind Hono-
lulu.

Only a single specimen was
collected of this plant, which, if
rightly referred to no. 16 of Dr. Pick-
ering's printed memoranda, is "frequent
on the mountains behind Honolulu,
at the elevation of 1500 feet. I have

met with it in no other collection,
^{young}

The (branches, petioles, ~~and~~ inflorescence^{&c.}) are shaggy with ~~few~~ dense, ferrugineous, multiarticulated hairs, much as in the preceding species. The leaves (often moderately unequal in the pair) are from 4 to 7 inches long by $1\frac{1}{2}$ to 2 inches in width, conspicuously acuminate, and at the base tapering into a petiole of 6 to 18 lines in length, the pubescence nearly as in *C. platyphylla*, that of the lower surface soft and velvety, fulvous-canescent. Peduncles rather longer than the petioles; the fully developed pedicels an inch or less in length. Calyx sparsely ferrugineous-villous, amplicate-expanding in the manner of *C. cordifolia*, but apparently crateriform or even cyathiform,

rather than rotate, of the same
herbaceo-membranaceous and veiny
texture, only 3 to 4½ lines in length,
^{much} less deeply ~~as~~ lobed than in C.
cordifolia, the lobes very broadly
triangular. Corolla hairy externally,
somewhat bilabiate, ^{half an inch long,} Ovary ovoid-
fusiform, glabrous, tapering into
a rather short and stout, sparsely
hairy style.

Except for the calyx and the soft
fulvous down of the lower face of
the leaves, this might be taken for
a variety of the following species.

17. Cyrtandra triflora, Gand.

C. glabrata vel primam ferm-
gineo-hirsuta; foliis oblongis sen
ellipticis utrinque acutis vel
acuminatis ~~argute~~ serrulatis
serratisve utrinque viridibus;
pedunculis brevis 3-5-floris; calyce
subaequaliter quinquefido, lobis
cylindraceo, lobis lato-lanceo-
latis corolla brevis, -- ~~It~~

Var. a, Gaudichandi; ramis foli-
isque prater costam venasque
paginae inferioris fermagineo-pu-
bescentes glabris; calycis lobis
tubo aequilongis.

Cyrtandra triflora, Gand. Bot.
Voy. Freyc. p. 447, t. 52; B.l.c.

Var. β , arguta; ramulis cum inflores-
centia fermagineo-hirsutis; foliis
majoribus ovalibus candato-

acuminatis crebre argutissime
serratis hirsutulis; calycis
(etiam ~~ad~~ fructiferi hirsuti)
lobis tubo brevioribus.

Var. f. lysiosepala; calyce fere quin-
quepartito; cat. praecedentis.

Stat. Sandwich Island; collected
by Gardichand on Oahu; in our
collection only from Hawaii, in the
district of Kuna. B. & R. in the
deep mountain-forest of the same
district ~~at~~

The specific name given by Gardichand is far from appropriate.
The peduncles in our larger-leaved and
more pubescent varieties bear five or
more flowers, and in the glabrate
form very commonly only two flow-
ers. In the varieties B. & R. the

leaves are from 4 to 6 inches long,
2 to 4 inches wide ^(very) closely beset
with narrow and ^{very} sharp salient
teeth, the petioles $1\frac{1}{2}$ or 2 inches
long. Corolla either pubescent
or glabrous. Ovary glabrous.
~~Style~~ Fruit globular.

18. Cyrtandra grandiflora, Gand.

C. foliis oblongis ^(sen ovatis) utrinque acu-
minatis glabratis subintegerrimis
glabratis subtus pallidis
puberulis, costa venis petiolo-
que pube brevissima ferrugineis;
pedunculo 1-2-floro bracteis foli-
aceis; calyce cylindrico subex-
breviter quinquelobo hinc saepe
profundius fissso corolla glabra
paullo brevior.

Gyrtandra grandiflora, Gand,
l.c. t. 55; Hook. & Arn. l.c.;
Ob. l.c.

G. Endlicheriana, Mus. in
Rel. Meyen. p. 359, t. 10?
G. Kueckiana, Meyen, Riese;
Walp. Rel. Meyen. l.c.?

Hab. Sandwich Islands; on
the mountains behind Honolulu,
Oahu.

The specimens, in poor condi-
tion, furnish little additional
information ^(relative to) about this species.
The nascent leaves, peduncles, ca-
lyx, &c. are ferruginous with a fine
pubescence, which for the most part
is caducous. The cylindrical calyx
when well developed is an inch long;
^{soon glabrous,} its triangular-acuminate teeth or lobes
only 3 lines long.

19: Cyrtandra paludosa, Gaud.

"suffruticosa"; ~~hms~~

C. glabra; foliis oblongis sublan-
ceolatisve utrinque acuminatis
serratis subtus pallidis; pedun-
culis brevissimis nudis 1-5-floris;
calyce cylindraco-campanulato
inequaliter quinquefido, lobis
triangulari-acuminatis, ~~foris~~
anticis tubo aequilongis; corolla glabra;
fructu olivaceoformi.

Cyrtandra paludosa, Gaud. l.c.;
Hook. & Arn. Bot. Beech. Voy.
p. 91.

Hab. Sandwich Islands; on the
mountains behind Pahr, Honolulu, Pahr,
~~on Hawaii,~~ between
and in woods ~~near~~ the crater Lua
Pele, ~~Hawaii~~, and Mouna Roa.

This is most related to C. grandiflora; but only the nascent leaves &c. are ferruginous-pubescent; the adult parts perfectly glabrous. The leaves are obtusely and often commonly rather strongly toothed, and the common peduncle only from one to three lines long, terminated by a pair of small scarious bracts and from one to five umbellate, slender pedicels, which are usually half an inch long. Calyx half an inch long. Corolla, as in C. gr. grandiflora with a rather ample limb. Ovary glabrous. Fruit oblong or elongated-oblong, 6 to 8 lines in length.

The stem of this species, according to Dr. Pickering's notes, is "sub-herbaceous, from 2 to 4 feet high", or "suffrutescent".

~~SECRET~~

20. Cyrtandra Lessoniana, Gand.

C. foliis oblongis ~~seu ellipt~~ utrinque saepius acuminatis denticulatis supra hirsutulis subtus ~~ramisque pube~~ cum ramis et inf pedunculisque pube adpressa ferruginea sericeis; pedunculis elongatis 1-3-floris; bracteis lanceolatis; calyce 5-6-partito, lobis ovatis seu ovato-lanceolatis corolla extus sericeo-villosa brevioribus vel demum ^{laxis} aequalibus; fructu ovato.

Cyrtandra Lessoniana Gand. l.c. t. 54; Hook. & Arn. l.c. 3; DC. Prodr. 976, 284.

Var. β . Calycis lobis elongato-lanceolatis; corolla subglabrata.

Hab. Oahu, Sandwich Islands, on the mountains behind Honolulu, Var. β . Mountains West Maui.

The deeply-parted ^(divisions) lobes of the calyx are at first considerably shorter than the corolla, but they ~~are across~~ enlarge with age; at first silky ^{villous} and ferrugineous, when old they are glabrate. They are not always so broad as Gandichand represents them, nor with such undulate-reflexed margins; sometimes they become merely broad-lanceolate; as in the variety from ^{they are} Marii, still narrower. When narrower they are occasionally six in number. Peduncle with the pedicel $1\frac{1}{2}$ to 2 inches ^{sometimes there are the pedicels and flowers;} long; the bracts 3 or 4 lines long. Corolla 9 lines long, the limb short. Fruit ovate, 9 lines in length.

white or greenish, as in all ~~these~~ these species.

21. Cyrtandra Garnottiana, Gand.

C. foliis ellipticis vel obovatis utrinque saepius anguste acuminatis denticulatis supra hirsutulis subtus cum inflorescentia ramisque canescenti-velutinis; pedunculis gracilibus 3-5-floris; bracteis parvis; calyce campanulato subaequaliter quinquefido, lobis triangularibus tubo subaequilongis corolla extus hirsuta ^{subdimidio} brevioribus.

Cyrtandra Garnottiana, Gand.

l.c. t. 53; Hook. & Arn. l.c.; Bl.

Prodr. 9, p. 284.

Stat. Oahu, Sandwich Island, on the mountains behind Honolulu.

This is one of the small-flowered species; the corolla being only 4 or ⁵ five lines long, and nearly twice the length of the calyx. The lower surface of the leaves is whitened with a very soft and fine, velvety down; that on the pubescence of the calyx is similar, but rather more villous. Peduncles about an inch long, shorter than the slender petioles, the pedicels of nearly the equal length; bracts lanceolate or linear-subulate. The fruit ~~which~~ is figured by Gandichand as ovate.

22. Bystandra Macraei, Sp. Nov.

C. foliis lato-ovatis acuminatis
denticulatis supra glabris subtus
ramulisque novellis pruinoso-in-
canis ad venis pubescentibus; pe-
dunculis brevissimis ^{fasciculatis} cymoso-
multifloris; calyce aequaliter quin-
quepartito corolla pruinosa fruc-
tique ovoideo multo brevior,
lobis e basi lata lanceolatis.

Hab. Oahu, Sandwich Islands,
Macrae, 1825, Gandichand, in the
voyage of the Bonite: "at the ^{on} the moun-
tains behind Honolulu," Brackenridge.

"A shrub, ten feet high, ac-
cording to Dr. Pickering's notes: the
branches in the specimens seem
as if nearly herbaceous. They are
stout, more or less quadrangular,
glabrous, except the younger parts,

which are pruinose rather than puberulent, as is the whole inflorescence. Leaves 4 to 8 inches long, 3 to 6 inches wide, broadly ovate, with a rounded or sometimes a cuneately narrowed base, and ^{the summit} with a narrow acumination, minutely serrate, green and soon perfectly glabrous on the upper surface, the lower whitened with a ~~fine~~ ^{persistent and dense} pruinosity, the midrib, the numerous principal veins, and the veinlets pubescent; petiole $1\frac{1}{2}$ to $3\frac{1}{2}$ inches long. Peduncles at most a quarter or one half ^{of} an inch in length, or in the upper axils scarcely any, ~~for~~ many-flowered, or the ~~uppermost~~ later ones rather few-flowered; pedicels cymosely or fasciculately aggregated, 3 to 6 lines long; the bracts minute. Flowers very small for the genus, Calyx pruinose-canescent,

only a line and a half long, thickish, evidently valvate in aestivation, equally and deeply five parted, the divisions triangular-lanceolate, rather blunt. Corolla $4\frac{1}{2}$ lines long, externally pubescent pubescent, cylindraceous-funnel-form, with short and apparently nearly equal, rounded lobes. Stamens not examined. Pistil of the genus. Fruit (immature) about 4 lines long, conical-ovoid or ellipsoidal, probably ^{more or less} fleshy.

The specimen in the collection is in fruit. The ~~flower~~ corolla is described from a solitary flower on a specimen from Macrae's collection. - The remaining known species of the Sandwich Islands, - not met with by our naturalists, but found by Gandichand at his second visit,

is C. Menziesii, one of the
small-flowered sort; ^{the characters are} ~~may be char-~~
^{appended.} ~~acterized~~ as follows.

23. Cyrtandra Menziesii, ^{l.c. in not.} Hook. & Arn.

C. subglabra; foliis quaternis (an
semper?) oblongis seu lanceola-
tis utrinque acuminatis sermula-
tis; pedunculis petiolo brevioribus
umbellato-plurifloris; calyce
quinquepartito, lobis ^{elongatis} subulato-
setaceis corollae ^{paullo} ~~fructu~~ ^{um} ~~que~~
brevioribus. subaequantibus. (Flores vix semi-
pollicares; calycis lobi $\frac{1}{4}$ -pollic.
~~ae~~ fructus fere C. Macraei.)

Ord. Bignoniaceae.

1. Bignonia, Tourn.

1. Bignonia corymbifera, Vahl

Stat. Brazil, in the vicinity of Rio Janeiro.

In flower only; the fruit still unknown. The foliage, &c. much resembling Lundia larga, ^{DC.} but the flowers smaller, and the anthers glabrous.

There are imperfect and undetermined specimens of three other species of this genus, or order, collected in the vicinity of Rio Janeiro.

2. Arrabidaea, DC.

1. Arrabidaea Agnus-Castus, DC.
2. Arrabidaea conjugata, Mart.

Stat. Brazil, in the vicinity of Rio Janeiro; in blossom.

3. Adenocalymna, Mart.

1. Adenocalymna marginatum, DC.
2. Adenocalymna nitidum, Mart.
3. Adenocalymna longiracemosum, Mart.

Stat. Brazil, in the Organ Mountains and near Rio Janeiro; all in flower only. The fruit, lately made known by Miss (in Ann. & Mag. Nat. Hist. ser. 3, 7) not collected.

4. Spathodea, Beaur.

1. Spathodea Cotto, Db.

Hab. Brazil, in the vicinity of
Rio Janeiro: in flower.

5. Tecoma, Juss.

1. Tecoma speciosa, Db.

Hab. Brazil, near Rio Janeiro;
in blossom.

2. Tecoma Guarume, Db.

Hab. Peru, from Yanga to the
Andes.

The specimen is in fruit only, with
the capsule (of the genus) linear, pointed,

compressed, seven inches long. Dr. Pickering notes it as "a shrub, five to twenty feet high, in foliage much like a rose; the flowers yellow. It is probably T. sambucifolia, Hook. Bot. Mic. 2, p. 229, not of W.B.K.

3. Tecoma australis, R. Br.

Hab. Sydney, New South Wales; in fruit. (Seeds of the genus.)

4. Tecoma jasminoides, Lindl.

Hab. Newington, New South Wales; in blossom.

6. Jacaranda, Juss.

1. Jacaranda tomentosa, R. Br.

2. Jacaranda Claysoniana, Basar.

Stat. Brazil, in the vicinity of Rio Janeiro; the former in flower; the latter with the filicoid foliage only.

7. Eccremocarpus, Ruiz & Pav.

1. Eccremocarpus scaber, Ruiz & Pav.

Stat. Chili, in the mountains above Santiago.

Ord. Lentibulariaceae.

1. Pinguicula, Fourn.

1. Pinguicula Antarctica, Vahl.

Pinguicula Antarctica, Vahl, Enum.
1. p. 192; Hook. f. Fl. Antarc. 2, p. 338,
t. 119.

Hab. Orange Harbour, Trugia;
mostly in fruit.

2. Utricularia, Lin.

1. Utricularia nervosa, Weber.

Utricularia nervosa, G. Web.; Benj.
~~Utric.~~ Fl. in Mant. Fl. Bras.
Utric. p. 247, t. 21, f. 3, & 22, f. 5.

Stat. Brasil, in the vicinity of
Rio Janeiro.

2. Utricularia uniflora, R. Br.

3. Utricularia biloba, R. Br.

Stat. Sydney and Moolongung,
New South Wales.

Ord.

Acanthaceae,

1. Ebermayera, Nes.

1. Ebermayera elongata, Miq.

Adenosoma elongatum, Blume, Bijdr.
p. 757.

Erythracanthus elongatus, Nes & E.

Griffithianus, Nes in Ob. Prodr.
11, p. 78.

Ebermayera elongata, Miq. Fl.

Ind. Bot. 2, p. 775.

Hab. Luzon, Philippine Islands,
in the vicinity of Manilla.

2. Gymnostachyum, Nees.

1. Gymnostachyum affine, Nees?

Hab. Mindanao, near Caldera,
A small-flowered, perhaps undescribed
species.

3. Stygrophila, R. Br.

1. Stygrophila salicifolia, Nees.

Hab. Luzon, Philippine Islands,
near Manila.

4. Ruellia, Linn.

1. Ruellia australis, R. Br.

Hab. Hunter's River, New South
Wales: in fruit.

2. Ruellia serpens, Nees in Db.?

Hab. ~~At~~ ~~Min~~ Mindanao, at Cal-
dera, Philippine Islands.

A true Ruellia, allied to R.
crispa and hirta, diffuse and creep-
ing, but diverging from the char-
acter of R. serpens in that the leaves
are obtuse at both ends, and not
densely crenate. The materials
are scanty.

3. Ruellia flagelliformis, Roxb.

Hab. Sooloo Island. The specimens accord with the character of this ^{obscure} species as cited by Nes; but are too poor to complete the account of it.

4. Ruellia (Dipteracanthus) viscida.

Dipteracanthus (Aphragmia) viscidus, Nes
in Ob. Prodr. 11, p. 140.

Hab. Peru, in the vicinity of
Lima.

5. Prionitis, Lin., Miq.

1. Prionitis Stystrix, Miq.

Stystrix frutes, Kump. Herb. Amb.
7, p. 22, t. 13.

Prionitis, Lin., Hort. Cliff. n. 486.

Barleria Prionitis, Lin., Spec.;

Wight, Ic. Pl. Ind. 2, t. 452;

Nes in Ob. Prodr. 11, p. 237.

Hab. Luzon, near Manilla.

6. Lepidagathis, Willd.

1. Lepidagathis parviflora, Blume.

Hab. Luzon, in the mountains near Manilla: with triangular-ovate, roundish-ovate, and lanceolate leaves on the same plant,

7. Acanthus, Lin.

1. Acanthus ilicifolius, Lin.

Bilivaria ilicifolia, Juss.; Nes in
Ob. Prov. 11, p. 268; Wight, Ac.
Pl. Ind. t. 459.

Hab. Luzon, in the vicinity of
Manilla.

8. Stenandrium, Nes.

1. Stenandrium dulce, Nes.

Hab. Chili, in the vicinity of
Valparaiso; common.

9. Lagochilium, Nes.

1. Lagochilium repandum, Nes.

Lagochilium repandum, Nes in
Fl. Bras. Acanth, p. 86, & in
Dc. Prodr. II, p. 293.

Hab. Organ Mountains, near
Rio Janeiro, Brazil; an incom-
plete specimen.

10. Strobilorrhachis, Klotzsch.

1. Strobilorrhachis prismatica, ^{Nes.} ~~Klotzsch.~~

Ruellia prismatica, Velloz. Fl.
Flum. 5, t. 98.

Strobilorrhachis glabra, Link, Klotzsch,
& Otto, Lc. Pl. 2, t. 48.

S. prismatica, Nees in Fl. Bras. l.c.,
p. 84, & in Ob. Prodr. M. p. 294.

Stat. Brazil, in the Organ
Mountains, near Rio Janeiro, and on
the Corcovado.

21. Aphelandra, R. Br.

1. Aphelandra lyrata, Nees in
Ob.

Stat. Peru, near Obrajillo; the
form gathered by McLean in the
same District, the type of the species,

12. Graptophyllum, Nes.

1. Graptophyllum hortense, Nes.

Hab. Luzon, in the vicinity of
Manilla.

13. Rostellaria, Nes.

1. Rostellaria junceae, Nes.

Rostellaria sen Rostellularia junc-
ea, Nes in Ob. Prodr. 11. p. 376.
R. adscendens, Lindl. in Mitchell,
Exped.

Hab. Hunter's River, New South
Wales.

2. Rostellaria procumbens, Nes. var.

Hab. Mindanao, near Baldera,
Philippine Islands; the ~~var~~ singu-
lar var. R. Nes. l.c. with lanceo-
late and glabrate leaves, Justicia
adscendens, R. Br.

14. Dianthera, Linna.

1. Dianthera pectoralis, Linna².

Hab. Rio Janeiro, Brazil; the
~~var. β . of *Asca* smoother and broader-~~
leaved form; Rhytiglossa pectoralis,
var. β . Nes. The ~~Gronov~~

The Gronovian and Linnaean
name is by all means to be restored
for this genus ^(*Rhytiglossa*, *Leptostachya*, β . Nes.) if retained as distinct
from Justicia.

15. Amphiscepsia, Nes.

1. Amphiscepsia Beyrichii, Nes.

Hab. Brazil, in the vicinity of
Rio Janeiro.

6. Justicia, Linn.

1. Justicia Gendarussa, Linn., ^{Benth.}

Stat. Luzon, Philippine Islands,
in the mountains near Manila.

17. Chamaranthemum, Nees.

1. Chamaranthemum Beyrichii, Nees.

Stat. Brazil, in the vicinity of Rio
Janeiro; the var. γ. rotundifolium,
of Nees; the androecium &c. as figured
in the Flora Brasiliensis. A small
fragment only collected.

18. Eranthemum, Linn.

1. Eranthemum variabile, R. Br.

Stat. Sydney, Hunter's River, &c.,
New South Wales.

2. Eranthemum bicolor, Schrank.

Stat. Near Manila, Luzon, Phil-
ippine Islands.

3. Eranthemum laxiflorum ^{Sp. Nov.}

E. glaberrimum; foliis ovato-sen-
lanceolato-oblongis ~~petiolatis~~
saepe acuminatis acumine
obtusis; pedunculis axillaribus
petiolo longioribus cymoso-tri-
multifloris; bracteis oblongis par-
vulis herbaceis; pedicellis calyce
longioribus; laciniis calycis se-
taeo-sutulatis tubo brevissimis
pluribus longioribus; corolla
"cambea" hypocraterimorpha,
lobis ovalibus.

Hab. Feejee Islands; base of
the mountains back of Mbra
Bay, ^{rare,} according to Dr. Pickering,
in the herbarium also ticketed as
from Sandul-wood Bay, Orolan, Is.

Shrub "6 feet high, ornamental", glabrous throughout. Leaves bright green, entire, 2 or 3 inches long, 9 to 18 lines wide, the veins inconspicuous, the base acute or obtusish; petiole 3 to 5 lines long. Peduncles from the upper axils, half an inch or an inch long, with a pair of foliaceous bracts at its summit ~~2 or 3 lines~~ 3 to 6 lines long, cymosely three-flowered, with the slender pedicels when well-developed ^{3 to 5} ~~3 or 4~~ lines long, the lateral ones bibracteolate; or more commonly the inflorescence developing into a 2-4 times dichotomous open cyme, the lower bracts mostly herbaceous, the upper ones $1\frac{1}{2}$ to 3 lines long. Lobes of the deeply 5-parted calyx 3 lines in length, very slender. Tube of the "pale blue", shaggy, strictly hypericateriform corolla an inch

in length slender; the ^{broad} lobes 7
to 9 lines long. Filaments a
little exserted; anthers of the genus,
as also the rudiments of the second
pair of stamens. Capsule an
inch long, the lower half sti-
pitiiform and sterile.

A showy species, belonging
to the same group with E. bi-
color, and with a truly cymose,
open inflorescence. The color of the
flowers is stated from ~~the~~ Dr. Pickering's notes. This and
the following ^{males} are distributed by Dr. Seemann, under the
name of [†]"Graptophyllum hortense," which throws
doubt on the assigned difference in color.

4. Eranthium insularum, Sp. Ar.

E. glabrum; foliis ovatis lanceolatisve
obtusae acuminatis; pedunculis
axillaribus seu ramos terminanti-
bus brevibus 1-3-floris; bracteolis
minutis; calycis laciniis subu-
latis tubo duplo triplo longi-

Oribus; corolla "purpurea" in-
fundibuliformi, lobis oblongis.

Hab. Feejee Islands; "frequent
and sometimes cultivated." Varau
and Lifuka, Friendly Islands.
Prof. Harvey.

"An ornamental shrub, 6 feet
high, with purple flowers." Closely
related to the foregoing species; the fo-
liage ~~same~~ and habit similar. The
flowers, however, are fewer, solitary or
geminat^{upper} in the axils or at the sum-
mit of short branchlets, on peduncles
only 3 lines long, or some of them
3-flowered; the corolla is shorter, ~~bro-~~
the tube broader and gradually di-
lated upward; the lobes narrower, 4 or
5 lines long; the ~~calyx both~~ divisions
of the calyx shorter. Androecium
is ~~same~~ wholly similar, but the

fertile filaments, perhaps more
exserted. Leaves sometimes obscurely repand.

Whether Justicia longifolia
of Forster (J. sinuata, ~~Frank~~ Soland),
which Kun has appended to his genus
~~Alphacanthus~~ ^{Antha} canthus, is a congener of
this or not I am unable to as-
certain; but this and the preceding
certainly ^{belong} to Evanthemum.

19. Chatacanthus, Kun.

1. Chatacanthus repandus.

C. glaber, elatus; foliis ovato-lan-
ceolatis seu oblongis acumin-
obtusis repandis sinuatisve
membranaceis; pedunculis cymoso-
panicifloris; corolla extus calyce
que minutim pubescentibus.

Justicia repanda, Forst, Prodr. Fl. Ins.

Austr. p. 3; Nahl, Enum. p. 155?
Eranthium repandum, Roemer,
& Schult. Syst. 1. p. 175?
Anthacanthus repandus, Nees in
Ab. Prodr. 11. p. 462?

Stat. Orolan, Feeje Islands.

Shrubby? ~~apparently rather tall~~,
diffusely branched. Leaves one or
two inches long, on petioles of 3 or 4
lines in length, thin. Peduncles in
the uppermost axils, 2 or 3 lines long,
bearing 3 to 5 flowers. Bracts and bract-
lets minute. Calyx-lobes setaceous-
serrulate, pubescent, $1\frac{1}{2}$ to 2 lines long,
shorter than the tube of the corolla, -
which is white, minutely bescent out-
side, ~~the appear barely to~~ scarcely
half an inch long, apparently between
funnel-form and salver-shaped; the

five lobes ^{nearly equal, oblong,} ~~equal, roundish,~~ Stamens 2, no rudiments of the second pair. Anthers as in C. Persoonii, i.e. ~~with a broadly lanceolate connective, the~~ didymous rather than cordate, the cells of delicate texture, somewhat divergent below, oval or oblong, on a broadly lanceolate connective.

This from the leaves should be Forster's Justicia repanda from Tanna. The inflorescence accords with that of the two Feejean species of Evanthemum described above; but the small flowers and the anthers are not those of that genus; while they do correspond with the Cape species upon which Nees founded his genus Chotacanthus.

20. Blechnum ^{P.} Brownei.

1. Blechnum Brownei, Juss.

Hub. Luzon, near Manila.
Doubtless introduced ~~into L.~~ from
Tropical America into Luzon, where
it was also gathered by Stanke.

21. Dicliptera, Juss.

1. Dicliptera tomentosa, Nees.

Hab. Peru, in the environs of Lima, and a glabrate state of the same at Yanga.

2. Dicliptera acuminata, Juss.

Hab. Peru, in the vicinity of Obrajillo.

3. Dicliptera Burmanni, Nees.

Hab. Luzon; in the vicinity of Manila

4. Di cliptera frondosa, Juss.

5. Di cliptera clavata, Juss.

Hab. Tahiti, Society Islands. —

The specimens of ~~both~~ much too imperfect to throw ~~any~~ additional light upon these two species. One specimen of the former species, however, is finely and softly pubescent; the other, as described, glabrous or nearly so. — Of D. clavata, there is fruit dehiscent fruit to show that the plant is a true Di cliptera, and that Forster's description, reproduced by Guillemain (in Repl. Jart. p. 43) is correct. In the character ~~from~~ which ^{suggested the} specific name, ~~was taken~~ it accords with the following species, but the clavation of the peduncles, &c. is indistinct. The bracts subtending the ramifications

of the inflorescence are ~~nodes~~ minute and subulate; the involucral valves are "linear-oblong" or rather linear-spatulate and small only two lines long. The apparent contradiction in Vahl's description which so puzzled Steud (Prodr. 11, p. 490) is ^{readily} ~~readily~~ harmonised by noting that the word "bracteis" in the diagnosis refers to the involucral valves, in the appended remarks, to those which subtend the ramifications.

b. Dicliptera (Peristrophe) tinctoria,

Tab. Uroline, Society Islands: enumerated by Dr. Pickering among introduced plants: perhaps cultivated.

The specimens are of a ^(smooth) ~~glabrate~~ form of the species, with tapering-

acuminate leaves and lax inflo-
rescence, as if grown in shade,
much resembling Peristrophe montana,
Nees, which, with several other species,
should probably be merged in ~~the~~
~~the~~ the wide-spread P. tinctoria.
I have examined ripe fruit in the Sa-
moan specimens only: here the
dissepiment clearly separates below
from the ~~valves~~ valves and rises
upwards, as in Didiplera. In a
revision of the order probably this char-
acter will be less regarded, and the
genus Peristrophe suppressed.

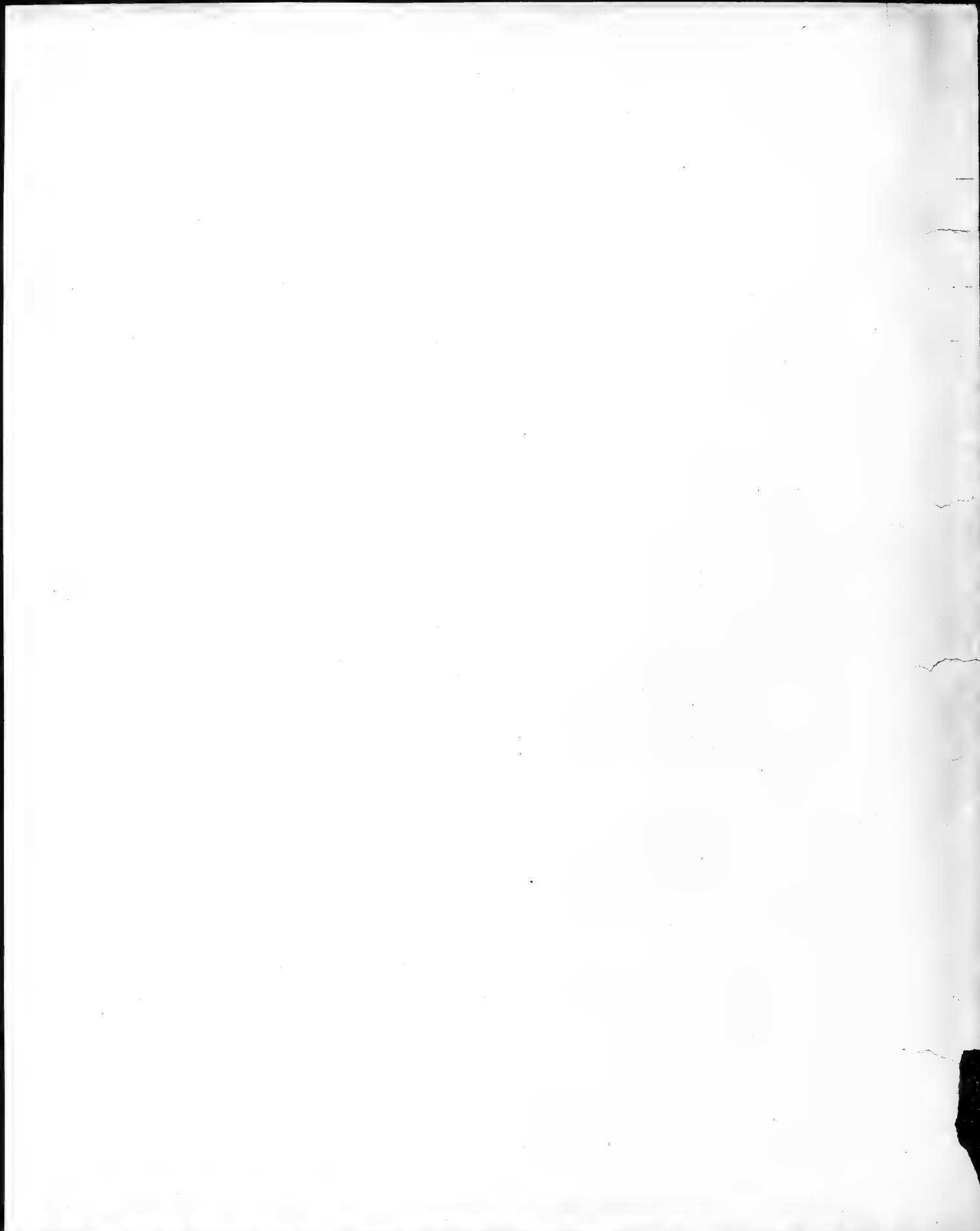
Didiplera umbellata, or ~~vertical-~~
~~latis~~ Juss.? was picked up, without
flowers, at St. Jago, Cape de Verde
Islands.

22. Hypoestes, R. Br.

1. Hypoestes purpurea, R. Br.

Stat. Luzon, in the Majai-jai mountains,

Several ~~undeterminable~~ Acanthaceae specimens, undeterminable on account of their ~~incomplete~~ insufficiency, are in the collection, mostly from the Philippine Islands.



Ord. Verbenaceae.

In this order the collection contains nothing of novelty or ^{except the few specified which follow the list,} particular interest. The species collected are: -

Spielmannia Africana, Willd.,
picked up at Grape Town.

Gloanthus Stoechadis, R. Br., at
Hunter's River, New South Wales.

Verbena erinoides, Lam., at Rio
Negro, North Patagonia.

Verbena spathulata, ^{and V. Berteri, Schauer,} Willd., on the
Andes above Santiago, Chili. #

Verbena Misspida, Ruiz & Pav., at
Santiago, Chili,

Verbena Berteri, Schauer, at Val-
paraiso.

Verbena littoralis, H. B. K., at Val-
paraiso and at Callao and Lima.

Verbena cuneifolia, Ruiz and Pavon, at Obrajillo, Peru.

● Verbena officinalis, Linn., ^{at the} Bay of Islands, New Zealand; doubtless introduced.

Stachytarpha bayenensis, Vahl near Rio Janeiro, also Sandwich Islands, where it is naturalized.

Lippia scorodonioides, HBK., at Obrajillo, Peru.

Lippia seriphivoides, ^{an undescribed} ~~a new~~ shrubby species, at the mouth of the Rio Negro, North Patagonia, Vide infra. (Rio Negro, N. Patagonia, and)

Lippia canescens, HBK., at Cuzco, Peru.

Lippia nodiflora, Richard, at Manila, Luzon.

Lippia geminata, HBK., at Lima, Peru.

Lantana nivea, Nutt., L. mixta,
Linn., ^{and} L. lilacina, Desv., from
the vicinity of Rio Janeiro; and
● L. camara, Linn.? from Lima.

Cithar^{ar}oxylum cyanocarpum,
Hort. & Arn., in fruit,, and from
behind Valparaiso. ^{(pure, in the}
^{Citharoxylum spinosum, R. & B. K. at Baños, valley of}
Canta, Petrea subserrata, Cham., at
Rio Janeiro.

Premna integrifolia, Linn.
from ^{swamp} ~~all~~ the South Sea Islands,
and P. vertita, ^{Schauer,} from the Fuzie
and Philippine Islands. Vide infra.

Callicarpa eriochloea, Schauer,
at Manilla.

Callicarpa longifolia, on a
small island in the Sooloo Sea.

Aegiphila cuspidata, Mart.,
well figured by Schauer in the
Flora Brasiliensis, from ~~Rio Jan-~~
~~eiro.~~ and

Aegiphila fluminensis, Vellozo,

Gardner's no. 5574, not cited in the
Flora Brasiliensis, from the vicinity
of Rio Janeiro ^{near} ~~from~~ ^{Rio} Janeiro
~~Euphorbia triantha~~, Schauer, ? in print only.
Nolkameria aculeata, Linn., from
a cultivated tree at the Cape of
Good Hope.

Glendendron tomentosum, R. Br.,
at Hunter's River, New South Wales,

Glendendron villosum, Blume
and G. acuminatum, Wall., picked
up at Singapore.

Glendendron intermedium, Cham.,
the mountains of
Luzon near Manila.

Glendendron inermis, R. Br. var. ?
Oceanicum, Caldera, Philippine Islands,
and the principal South Sea Islands.
Vide infra.

Glendendron (Tetrathyranthus)
ovalifolium, from the Feejee, and
G. (Tetrathyranthus) Amicorum,
from the Tonga and Samoan
Islands; new species, constitu-

ting a new section in the genus: vide infra.

- Gmelina Asiatica, Linn. and G. villosa, Roxb. - perhaps only forms of one species - from Caldera Mindanao, and from an island in the Sooloo Sea.

Vitex littoralis, A. Cunn., at New Zealand, figured in Stokes's Icones.

Vitex trifolia, Linn. f., at the Samoan and Feejee Islands; with the var. unifoliolata, Schauer, (or simplicifolia, Cham.) (V. ovata, Thunb., etc.) at the latter; also a form of this variety, more like the Chinese, but stouter and with very short-petioled leaves, on the sandy shores of Kauai and Maui, Sandwich Islands.

Vitex Negundo, Linn., Luzon, near Manila.

the Black Mangrove,)
Avicennia tomentosa, Jacq.,)

at Rio Janeiro, Brazil.

Avicennia officinalis, Linn.

● ex Schauer, at Bay of Islands, New Zealand, islands in the Solov Sea, and Sydney, New South Wales. — And finally the

Nesogenes euphrasivides, A. DC. of the Coral Islands, which, both by the anthers and the ovules, ~~belongs to~~ differs as well as aspect, differs from Myopaceae. vide infra.

1. Lippia, Lin.

1. Lippia scribnioides, sp. nov.

● L. fruticosa, intricato-ramosis=
simula, puberulo-scatrida; ramis
rigidis; foliis minimis fascicula-
tis ^{linearibus} spatulatis cuneatisve saepius
trilobis margine revolutis; capit-
ulis globosis demum elongandis
ex axillis breviter pedunculatis
solitariis vel breviter subracemosis;
bracteis ovatis ~~et~~ concaviusculis
rubiginoso-glandulosis calyce ~~brevi~~
~~pubescente~~ oblongo breviter bi-
fido brevioribus; antheris superi-
oribus saepe appendiculatis.

Hab. Rio Negro, North Patagonia, on the upland plain and elsewhere.

This, which Dr. Pickering characterises as "an unsightly shrub,

The leaves reduced to mere green granules oppositely disposed along the coarse blackish branches, ● the odor Thymus-like, if I mistake not occurs in the collections of Tweedie and of Gillies in the Sturkenian herbarium. It is there named Verbena rubiginosa, Gillies, - a name which was never published, so far as I can learn, and which ^{may} is preoccupied in the genus Lippia. The leaves are from one to $2\frac{1}{2}$ lines long, the smaller ones in the fascicles often entire, but the primary ones nearly all of them more or less three-lobed at the ~~ap~~ summit; the margins strongly revolute. Heads solitary or racemose at the ends of the branchlets, 2 or 3 lines in diameter, on peduncles of barely the same length; with age

The rhachis elongates somewhat and below is squarrose with the rigid bases of insertion of the flowers; the bracts (a line long) deciduous. Calyx $1\frac{1}{2}$ or 2 lines long, pubescent and subglaucous-glandular, the two lateral lobes or lips broad, mostly emarginate. Corolla ~~hardly~~^{not} twice the length of the calyx. Hypocrateriformous, apparently white, the limb somewhat bilabiate, glabrous. The two upper ~~stamens~~ stamens commonly (but not always) have the connective extended into a filament-shaped, clavate, glandular-tipped, somewhat exserted appendage, ~~like~~ nearly as in the Glandularia section of Verberna. The habit of the plant is not unlike that of Verberna seriphoides.

2. Premna, Lin.

1. Premna integrifolia, ^{Lin.}

Hab. On the coast of Mangsi, Society, Samoa, and Feejee Islands.

To whatever name this species be referable, all our specimens clearly are of one species, which includes P. Faintensis, Schauer in DC., and probably P. Gandichaudii, and some others, and which plainly shows that the nice distinctions drawn from the form of the teeth of the calyx - even those upon which the primary sections, Gumira and Premnos, are founded, are of ~~no~~ little avail. In this the short limb is usually more or less bilabiate, with one of the lips 2-toothed or emarginate,

the other 2-toothed, 3-toothed, or entire. The leaves vary considerably, the larger ones commonly inclining to be cordate.

2. Premna vestita, Schauer, f.

Var.? Vitiensis; foliis ^(basi sine profundiori) ~~magis~~ cordatis, calyce truncato vix lobato.

Tab. Near Manilla, Luzon, the same as Burnings's no. 599. Var. Feejee Islands; "frequent ^{along} the sea-shore, and occurring also at some distance behind."

Unwilling to add to the load of species which cannot now be understood without an entire revision, and observing how much the calyx-teeth vary in this genus, I refer the specimens from the Feejees to P. vestita although the truncate

border of the calyx, instead of being rather deeply four-cleft, has four ^{sometimes} or five very shallow incisions.

- The flowers may also be rather larger, but the means of comparison are not ~~considerable~~ ample.

3. Clerodendron, Lin.

1. Clerodendron inerme, R. Br.

Var. ? Oceanicum: foliis majoribus ($2\frac{1}{2}$ - 5 pollicaribus) magis acuminatis; calyce truncato denticulis 5 minutis; cymis nunc 5-7- floris.

Volkameria inerms, Forst. Prodr. p. 45, ^{vix Lin.}

Clerodendron inerme, Blume, Bijdr.
p. 808, excl. β .

C. Comersonii, Spreng. Syst.
2, p. 758?

Hab. Samoa, Tonga, and
^{abundant on the coasts;}
Feejee Islands; also ~~also~~ ^(Mindanao). Col-
lected also by Dr. Seemann on the
• Feejee, and by Dr. Harvey on the
Friendly or Tonga Islands.

This has evidently been con-
fused with C. inermis, which
has smaller and blunter leaves,
and, as described by Schauer, "calyce
5-dentato dentibus lato-triangulari-
bis acutis"; whereas in this the
(perhaps more cyathiform) calyx
is exactly truncate or obscurely
repand, with five mucroniform
denticulations. So far as ~~could~~
can be judged from all the spe-
cimens before me, this might
well claim to be specifically
distinct, and it may be C. Com-
mersonii. I suspect, however, that
intermediate forms occur.

2. Clerodendron (Tetrathyranthus*)
ovalifolium, Sp. Nov.

C. foliis ovalibus obtuse acumin-
ulatis integerrimis basi sub-
angustatis cum petiolo brevi ra-
misque teretibus glabris; cy-
mis plurifloris corymboso-panic-
ulatis carnescenti-puberulis;
corolla hypocrateriformis, tubo
(ultra pollicari) calyce obtuse
quadrilobo pluries longiore, lobis
4 rotundatis ^{inter se} equalibus stamina
adaequantibus.

* Limbus calycis et Corollae quad-
rilobus, ^{per se} regularis; cat. Eucleroden-
dri.

Hab. Iseeje Islands, in the mountains of Ovolau, is the ~~plant~~ second species mentioned in Dr. Pickering's notes; but the specimens are marked Sandulwood Bay.

Shrub or small tree, glabrous, except the inflorescence. Leaves rather coriaceous, oval and inclining towards obovate, 5 to 7 inches long, $2\frac{1}{2}$ to 4 inches wide, the petiole half an inch to an inch in length. Peduncles one or 2 inches long, compressed, as are its divisions, 7-12-flowered; the cymes forming a terminal corymbose panicle, the leaves gradually reduced to small oblong or lanceolate bracts. Pedicels 3 to 6 lines long. Calyx glabrous or glabrate, of a thick ~~text~~ and firm texture, ~~apparently~~ valvate in aestivation, 3 lines long, apparently

little enlarged after anthesis,
Corolla an inch and a half long,
of nearly the same diameter and
glabrous up to the limb, which
is regularly 4-parted and mi-
nutely camescent; the lobes
3 lines long, thickish, imbrica-
ted in aestivation. The genitalia,
which do not surpass the lobes
of the corolla are altogether
as in Clerodendron, except that
the two short lobes of the stig-
ma are flattish and obtuse.
Fruit unknown.

Notwithstanding the tetrame-
rous flowers, ~~there is no reason~~
before unknown in Clerodendron,
~~there~~ I do not hesitate to retain
this and the following species
in that genus.

3. Blendardron (Tetrathyrasthus) Ami-
corum, ~~Sps. Nov.~~

● C. foliis ovali- seu cuneato-
obovatis in petiolum brevem
attenuatis integerrimis ra-
misque subteretibus glabris;
cymis multifloris corymboso-
paniculatis canescenti. puber-
ulis; corollae tubo subinfundi-
bulari calyce quadrilobo 3-
4-pto lobis suis 4 subsim-
ilibus 2-3-pto longioribus;
staminibus modice exsertis.

Blendardron Amicorum, Sum. in Bourplandia, 10,
(Aug. 1892), p. 249.

Hab. Samoan Islands; also
Navau and Lifuka, of the Tonga
or Friendly Islands, Dr. Harvey.

A close congener of the last,
and one of which we have am-
pler materials. Perhaps they^{two}
may be found to run together.

But this has the leaves more narrowed at the base, and the larger ones from 9 to 11 inches in length; the cymes many-flowered; the calyx and the lobes of the corolla larger, while the tube of the latter is shorter and enlarging upwards, indeed nearly funnel form, and the four stamens are moderately exserted. The largest and best developed flowers are those of my specimen from Professor Harvey. In these the tube of the corolla attains an inch in length, and the spreading slightly unequal lobes about half an inch. In our specimens the parts are smaller. The tetramerous flowers recall Labillardiere's genus Oxera, of New Caledonia; which, indeed might now about as well be reduced to a

section of Clavodendron, not-
withstanding the ventricose and
irregular corolla and the ~~abs-~~
^{sterility} ~~trough~~ of the upper pair of stamens.
In these important respects
C. Amicorum accords with
Clavodendron. *

4. Nesogenes, A. D. C.

Calyx obconicus, 10-nervis, 5-dentatus,
dentibus triangulatis, post anthe-
sin auctis patentibus. Corolla
bilabiata, labio superiori bipar-
tito, inferiori ~~trilobo~~ tripartito,
lobis rotundatis consimilibus,
posticis paullo brevioribus. Sta-
mina 4 fertilia, ~~cum rudimen-~~
~~to quinti~~ didynama, cum ves-
tigio filamenti quinti: antherae

* Since these descriptions were
drawn up, Dr. Seemann has published
a character of this species, in the Bom-
plandia of Aug. 15, 1862, ^(as above cited) and fortunately
under the same specific name which
I had chosen. But he does not men-
tion the shortness of the corolla, nor ^{the} ~~the~~
tetramerous character ^{with that of the calyx} which ~~especi-~~
~~ally distinguishes~~ is most remarkable.
Indeed Seemann describes the calyx
as quinquefid, ^{probably an oversight, as it} which is not the
case in any of the specimens before
me.

biloculares, didyma, loculis
^{paullo}~~ma~~ divergentibus basi aristulatis.
Discus hypogynus nullus. Ovari-
um ovatum, biloculare, loculis
uniovulatis: stylis terminalis,
filiformis: stigma parvum
indivisum. Ovula e basi locu-
li erecta, anatropa. Infructus
sicca, mucumtacea, parva,
calyce inclusa, epicarpio ten-
uissimo, endocarpio crustaceo,
biloculari (~~nunc~~ vel dissepimen-
to evanido uniloculari), di-
sperma, ^{a. vel atropu monosperma.} Semen cylindraceum,
testa reticulata, albumine par-
co. Embryo teres, radícula in-
fera cotyledonibus aequilonga.
Herba ^{sesquipedalis,} ut videtur annua, caulibus
basi nunc basi lignescen-
tibus, hirtello-scaltra, ramis
foliosis; foliis ^{oppositis} parvulis ovatis

basi angustatis in Petiolum
brevem attenuatis integerrimis,
inferioribus nunc subcrenatis;
floribus parvis in axillis sepi-
sime geminis; pedicellis calyce
brevioribus minutissime bibrac-
teolatis mox decurvis; corolla
carulescente?

1. Nesogenes euphrasivides, A. Dc.

Myosporum? euphrasivides, Hook.
& Arn. Bot. Beech. Voy, p. 67.

Nesogenes euphrasivides (error
typogr.), A. Dc. Prodr. II, p. 703.

Hab. Coral Islands of the Pa-
cific: Whitsunday Island, Beechey.
In our collection from Taiara or
King's Island, Carlschoff, Karaka, &c.

This plant has ^{rather} the aspect
of Stedoma pulegioides or of a
Lythrum. It is not a shrub,
● but probably an annual, with
the stem indurated, and often as
it were lignescent at the base.
The anthers are completely two-
celled, and the ovules erect, so
that it really has nothing in
common with the Myoporaceae,
to which Hooker and Arnott referred
it, and upon whose description
Alphonse De Candolle character-
ized the plant as a new genus
in that order. Without doubt
it is a true Verbenacea; but I know
of no genus to which it is related.

Ord Globulariaceae

● Globularia salicina, Lam.
~~gathered~~ ^{little} collected) at Madeira, represents this
Old Word order in the present
collection.

12/1/19

Ord. Labiata.

1. Ocimum, Lin.

1. Ocimum Basilicum, Lin.

Hab. Tahiti, Society Islands; "naturalized and cultivated." (O. gratissimum is enumerated in the Botany of Beecher's Voyage and by Guillemin, but our naturalists noticed only the present species.) Samoa and Feejee Island; "clearly introduced"; at the Feejees "cultivated by the natives." This also is enumerated as O. gratissimum by Seemann in the list of his Feejee collection.

2. Plectranthus, L'Her.

1. Plectranthus australis, R. Br.

Hab. Sydney, New South Wales.

2. Plectranthus parviflorus, Willd.

Hab. Hunter's River, New South Wales.
Kauai and Hawaii, Sandwich Islands.
Indigenous?

3. Plectranthus Forsteri, Benth.

Hab. Manna, Navigators' Island,
Ovolan, Is. Feejee Islands. It is ^{the} Colerus
atropurpureus of Dr. Seemann's list.

3. Colerus (Lour.)
acuminatus

1. Colerus acuminatus, Benth.

Hab. Luzon, in the vicinity of
Manilla, where it was first found
by Chamisso.

2. Colinus scutellarioides, Benth.

Stat. Luzon, in the Majajajai Mountains near Manilla: a variety with very coarsely toothed leaves, mostly cuneate at the base, not purple-blotched, approaching Miguel's var. laciniatus (C. laciniatus, Benth.): in fruit only.

4. Peltodon, Pohl.

1. Peltodon radicans, Pohl.

Stat. Brazil, in the Organ Mountains near Rio Janeiro.

5. Styptis, Jacq.

1. Styptis fasciculata, Benth.

Stat. Brazil, in the Organ Mountains,

near Rio Janeiro.

2. Styptis pectinata, Port.

Stat. Peru, in the exsiccated river
bed of the Rimac, at Lima.

3. Styptis maculans, Port.

4. Styptis spicigera, Lam.

5. Styptis capitata, Jacq.

6. Styptis brevipes, Port.

Stat. Philippine Islands: no. 4 and
no. 6 from Caldera, Mindanao; the
others from Luzon, near Manila.
All of them doubtless introduced from
America.

6. Marsypianthes, Mart.

1. Marsypianthes hypstoides, Mart.

Stat. Brazil, in the neighborhood of Rio Janeiro: a most common plant.

7. Lavandula, Tourn.

1. Lavandula stachas, Lin.

2. Lavandula pinnata, Lin. f.

Stat. Madeira; on the sea coast at Funchal.

8. Mentha, Lin.

1. Mentha viridis, Lin.

2. Mentha piperita, Lin.

3. Mentha pulegium, Lin.

(the two latter also)
Itab. Madeira; and in Chile,
near Valparaiso and Santiago;
introduced from Europe.

4. Mentha aquatica, Lin.

Itab. Cape of Good Hope, in
the vicinity of Cape Town; doubt-
less introduced from Europe.

5. Mentha satereioides, R. Br.

Itab. New South Wales, at Syd-
ney.

9. Lycopus, Tourn.

1. Lycopus australis, R. Br.

Itab. Wollongong, New South
Wales.

This Australian Lycopus was

first arranged by Benthams as
a variety of L. Europaeus, and then
reinstated, with the remark that
it is very closely related to the
North American L. sinuatus.
As I cannot specifically distin-
guish the latter from L. Euro-
paeus, nor the Australian from
the North American, except that
L. australis has more slender
calyx-teeth, Benthams sugges-
tion that all the known species
may be reduced to L. Europaeus
and L. Virginicus, becomes more
and more probable.

10. Origanum, Journ.

1. Origanum vulgare Lin.

Hab. Madeira. - This is recorded
in DeCandolle's Prodr. as if indige-

now to the New as well as to the
Old World. But in the United
States it ~~has scarcely~~ is only nat-
uralized, and that very sparingly,
in some districts,

III. Micromeria, Benth.

1. Micromeria varia, Benth.

Tab. Madeira; Corral, on dry
rocks, and with it a fragment of
the common Calamintha Olivio-
podium, Benth.

12. Gardouquia, Kuiz & Pav.

1. Gardouquia Gilliesii, Graham.

Stat. Chile; common on the slopes behind Valparaiso. "Flowers bluish-purple, but turning red in drying."

2. Gardouquia elliptica, Kuiz & Pav.

Stat. Peru; common at Obrajillo, where it was before collected by Griseb.

3. Gardouquia revoluta, Kuiz & Pav.

Stat. Peru; frequent in the environs of Obrajillo and of Baños. This ^{ascends} ~~extends~~ ~~upwards~~ into the alpine region, and is therefore included, and well characterized in Weddell's Chloris Andina.

4. Gardouquia pilosa, Sp. Nov.

G. fruticosa; ramis glabris; foliis lato-
sen rhombico-ovatis petiolatis sub-
serratis lineato-venosis hand cori-
acis puberulis subtus vix canes-
centibus; verticillastis multifloris;
calycis ~~herm~~ hirsuti pedicello lon-
gioris dentibus subulatis, fauce intus
nuda; corollis pilosis calyce
(semipollicari) triplo longioribus.

Stat. Peru, at Baños; "frequent
along the upper margin of the [al-
pestrine] region".

A shrub, 3 to 5 feet high. Leaves
half an inch or less in length, not in-
cluding the distinct petiole, either
rounded, or somewhat truncate, or cune-
ate at the base, irregularly and rather
sharply serrate or serrulate, puberulent,
or the younger ones and bracts hairy.

paler underneath, glabrate with age. Pedicels 2 to 4 lines long. Calyx tubular, hirsutely hairy, the teeth broadly subulate, of equal length. Corolla fully an inch and a half long when fully developed, ~~strong~~ densely pubescent in the ~~bud~~ bud, and moderately so in the expanded blossom, "Scarlet", the lobes ovate and obtuse. Stamens slightly exserted. In the foliage this resembles G. rugosa, but the flowers are much larger, the corolla elongated. &c. It should be compared with G. pulchella, H.B.K.; but the branches are glabrous, the leaves not tomentose beneath ^{nor} ~~or~~ coriaceous.

13. Sphacela, Benth.

1. Sphacela Lindleyi, Benth.

Stat. Chili; common around Valparaiso.

2. Sphacela lamiifolia, Benth.

Stat. Peru, in the vicinity of Obrajillo. Corolla straight, "scarlet".

3. Sphacela hastata, Sp. Nov.

S. herbacea; foliis amplis hastatis creberrime crenulatis utrinque canescente cano-tomentosis, floralibus oblongo-lanceolatis sessilibus; cymis laxis multifloris thyrsium elongatum ef-

ficentibus; corollis "purpureis"
tubulosis calyce triplo lan-
gioribus; ~~staminibus~~ ~~longe~~
exsertis, genitalibus sublonge

Stat. On Haleakala, E. Maui,
Sandwich Islands, from 3000 to
5700 feet above the sea.

Apparently herbaceous and
tall, but the height of the stems
not recorded, canescent with a
fine and soft tomentum. Can-
line leaves about 6 inches long,
on petioles of $1\frac{1}{2}$ to two inches
in length, whitened with a close
and very soft tomentum, slightly
rugose, exactly and rather narrowly
hastate, $2\frac{1}{2}$ to 5 inches broad at
the base, including the tapering
and acute basal lobes, ^{above} tapering
to an acute or acuminate apex,

The margin finely and closely
crenulate. Lowest floral leaves
2 or 3 inches long, sessile by
a somewhat narrowed base;
the upper successively smaller.
Inflorescence hoary-pubes-
cent, at length glabrate, some-
what glandular; the many-flow-
ered ~~cymes~~ dichotomous cy-
mes short-peduncled, approxi-
mate, forming an elongated
thyrsoidal panicle. Pedicels
slender, 2 to 4 lines long. Calyx
3 lines long, in fruit 5 or 6 lines
long, ^{moderately} ~~slightly~~ bilabiate; the nar-
rowly subulate teeth rather shorter
than the cylindraceous-campan-
ulate tube. Corolla about an
inch long, somewhat pubescent.
Stamens and style conspicuously
exserted. Anthers very smooth.
— A most striking and distinct species.

14. Salvia, Lin.

1. Salvia coccinea, Lin.

2. Salvia mentiens, Pohl.

3. Salvia confertiflora, Pohl.

Hab. Brazil, at Rio Janeiro and
in the neighboring Organ Mountains.

4. Salvia strictiflora, Hork.

5. Salvia Cruckshanksii, Benth.

Hab. Peru; the former from Yaso
to Obrajillo; the latter abundant at
and above Obrajillo; both just where
they were collected by Cruckshanks.

6, Salvia occidentalis, Swartz,
(Peru, at Lima.)

Stat. { Tahiti, Society Islands.
Manna, Samoan Islands: "seem-
ing indigenous on dry rocks." Not
before recorded from the islands of
the Pacific; but M. P., who sends
it from Tahiti states it to be very
common there. Andersson gathered
it on the Galapagos, and Kunze
at the Sandwich Islands. Doubt-
less it has been introduced from the
America.

7, Salvia plebeja, R. Br.

Stat. New South Wales, on Hunter's
River.

8. Salvia Africana, Lin.

9. Salvia paniculata, Lin.

Hab. Cape of Good Hope, in the vicinity of Cape Town, where they are common species.

10. Salvia Aegyptiaca, Lin.

Hab. St. Jago, Cape de Verde Islands: common on dry rocks.

15. Brunella, Tour.

1. Brunella vulgaris, Lin.

Hab. Woolongong, New South Wales. One of the most widely distributed of Phanogamous plants.

16. Scutellaria, Lin.

1. Scutellaria humilis, R. Br.

Hab. New South Wales, at Hunter's River. ~~Also~~ A Tasmanian species, allied to S. minor. of Europe and Asia.

Perilomia oeymoides, St. B. K., which ~~Dr.~~ Dr. Banks collected at Obrajillo, was seen ~~seen~~ abundantly there, ^{appears from} as Dr. Pickering's Memoranda. But no specimen exists in the collection.

17. Stachys, Linna.

1. Stachys albicaulis, Linna.
2. Stachys grandidentata, Linna.
3. Stachys Macraei, Benth.
4. Stachys Bridgesii, Benth.

Hab. Chili, near Valparaiso, where they abound, except the last named, which was from the Cordilleras near Santiago.

5. Stachys arvensis, Linna.

Hab. Peru, in the Andes between Baños and Cuzco, taken for indigenous by Dr. Pickering. Also at Sydney, N. S. Wales, and St. Helena; introduced,

18. Leucas, Burton.

1. Leucas decernidentata, Smitt.

Hab. Society, Samoa, and
Feijee Islands, &c.; "naturalized."

2. Leucas Javanica, Benth.

3. Leucas linifolia, Spreng.

Hab. Luzon, Philippine Islands,
near Manila.

Leonurus Sibiricus, Lin. and
Leonotis repetaefolia, R. Br. were
picked up in the town of Rio Ja-
neiro, in waste grounds.

19. Gomphostemma, Hall.

1. Gomphostemma Philippinarum,
Benth. in DC.

Hab. Luzon, in the Majai-jai Mountains near Manila.

20. Phyllostegia, Benth.

An examination of the now extant materials ~~leads to~~ calls for the suppression of four of Bentham's species and for the establishment of as many new ones, two of which, ~~by~~ on account of their simplified inflorescence and their habit, constitute a peculiar section ^{and *P. filiformis* may rank as another.} of the genus. All the known species ^{(still are restricted to} ~~are for~~ ^{are} natives of the Sandwich Islands. The species

may be disposed as follows:—

§ 1. Gemina.—Racemi ~~caulem~~ ~~terminantes~~ verticillastri flori, nunquam verticillastri 6-20-flori, in racemo caulem terminante dispositi, ^(val) in-
fimi (^{nunc lusu} ~~rarore~~) omnes ~~in~~ axilla-
res. Corolla albae.

Calycis lobi tubo aquilangi, foliacei
amplissimi, hirsutissima, P. vestita.

Calycis lobi tubo pl. m. breviores:

Fructiferi ampliati, explanato-pa-
tentes, foliacei. Pedicelli calycem
sericeo-pubesce, subaequantes. P. grandiflora.

Fructiferi mod. explanato-paten-
tes (P. racemosa forte excepta).

Glabra: pedicelli graciles,

Verticillastri pluriflori, mod.
pedunculati.

P. brevidens,
^{2. sp.}

Verticillastri 6-flori, cymulis
saepe pedunculatis!

P. glabra.

Hirsutissima: pedicelli breves. P. hirsuta.*

* Known only by the deplorate specimens
of Macrae's collection, but probably of this genus.

Molliter pubescens seu villosa.

Pedicelli graciles calyce
sepiissime longiores: pili
patentes. —

P. parviflora.

Pedicelli calycem cum
corolla strigoso-pubesc.

centem subaequantes. P. clavata.

Pedicelli brevissimi, plurimi.

Calycis lobi subulato-

lanceolati tubum
subaequantes.

^(n. sp.)
P. stachyoides.

Calycis lobi ovati, ob-

tusi, tubo breviores. P. racemosa.

§ 2. Lateriflora. — Racemi simpli-
ciflori (~~Pedicellis~~ solitariis),
breves, ex axillis foliorum infe-
riorum. Corollae violaceae,
parvae.

Sentes.

Lobi calycis minutissimi tubo aequi-
longi, lineares.

P. floribunda.

§3. Staplostachya. Spica simplici-
flora terminalis, nuda. Corollae
albæ, tubo longo, ^{sub æqualibus} lobis crispis
~~inferius minus~~ ^{elongato} ~~et~~ ^{ampliato}.
Folia subtus cano-tomentosa.

Folia basi sat cordata; calycis
dentes ^{angusti acuti} ~~subulati~~. P. staplostachya, n. sp.
Folia basi vix cordata; calyx ~~repando-~~
truncatus, ~~obtusissime~~
~~sub-5-dentatus~~. P. truncata, n. sp. *

* Phyllostegia truncata (Sp. nov.): to-
mentulosa; foliis lanceolatis crenula-
tis basi truncatis vel subcordatis sub-
tus incanis; floribus ~~brevisissime~~ in
spicam simplicem digestis brevis-
sime pedicellatis; calyce puberulo
glanduloso, ^{repando} truncato, dentibus
brevissimis latis obtusissimis; corollæ

1. Phyllostegia vestita, Benth.
P. undique hirsutissima; foliis ovatis;
racemo elongato; calycis lobis folia-
ceis amplissimis patentissimis
ovatis oblongisve acutis saepe den-
tatis tubo aequilongis; corolla
brevi. — Variat racemo laxiore folioso
(P. vestita)

tubo elongato, lobis ~~elongatis~~ rotun-
datis subaequalibus crispis. — Maui,
Sandwich Islands, Coll. Kuny, no. 395.
— Upper leaves one or two inches long,
3 to 5 lines wide, velvety-pubescent above,
^{finely} white-tomentose beneath; lower leaves
not seen. Spike elongated, the lower pairs
of flowers an inch apart, the upper ap-
proximate. Bracts ^{stamens, style,} as in P. haplostachya;
the pedicels more obvious, a line or a line and a half
long. Calyx ~~cylindraceous, in fruit somewhat campanulate~~
glandular-atomiferous, cylindraceous becoming rather
campanulate, and in fruit ovate by the contraction of the
orifice, which ~~is truncate~~ has 5 very short and broad ~~teeth~~
or obscure teeth. Corolla an inch or more in length. Achenia
as in P. haplostachya, but slightly glandular, not hairy, at the
summit.

Benth.) et racemo denso,
nudo, foliis floralibus ple-
risque calycis fructiferi haud
superantibus (P. dentata Benth.)

Phyllostegia vestita & dentata,
Benth. in Bot. Reg. sub. n. 1292,
Lab. p. 651, & in Ed. Prodr. 12,
p. 553.

Sub. Hawaii, ^{in forest of} ~~on~~ the District
of Puna, and on Mouna Kea,
where it was discovered by Macrae.

Well marked by its ^{viny} minute or
even hispid hairiness, membra-
ceous ample leaves (4 to 6 inches
long besides the petiole, either rounded,
somewhat acute or truncate at the
base), and the ample foliaceous lobes
of the calyx which in fruit become
nearly half an inch long. In the

form with leafy inflorescence no less than in the other, the calyx lobes are apt to produce one or two teeth on each margin, corolla "white, rather small", its tube hardly exserted from that of the calyx.

2. Phyllostegia grandiflora, Benth.

P. appresse-pubescentis vel glabrescens; foliis ovato-oblongis sen ovatis crenato-serratis; racemo sub^{verticillatis b-floris;}laxo simplici; calycis lobis foliaceis ovatis obtusissimis patentibus tubo dimidio brevioribus, fructiferis ampliatissimis; corollae ~~albae~~ tubo extus sericeo calyce triplo longiore, labio inferiore maximo.

Prasium grandiflorum ^(+ P. macrophyllum) Gard.

Bot. Freyc. Voy. p. 453, t. 65, f. 2.

Phyllostegia grandiflora, Benth.

l.c. & in Linnaea, 6, p. 78; Hook.

& Arn. Bot. Beech. Voy. p. 93.

on the mountains near Honolulu

Hub. Oahu, where it was collected by ^{Nelson,} Macrae, Chamisso, Gaudichaud, and most latter collectors.

Leaves 2 to 4 inches long, often acuminate, glabrate or glabrous above, more or less pubescent with short hairs beneath. Axis of the inflorescence, pedicels, calyx &c. silky-pubescent, less so with age but not becoming glabrous. ~~Verticillasters 6-flowered, the slender pedicels not raised~~
~~Cordolla at first straight~~ Calyx on any common peduncle, at first rather cylindraceous, with the spreading lobes a line and a half or less in length, in fruit campanulate, with the lobes ^{"white"} from 2 to 3 1/2 lines long. Tube of the cordolla

usually an inch long, at first straight
straight, in anthesis becoming re-
curved. ~~To A~~

To this species I suspect belongs
Gaudichaud's Prasium macrophyllum
also; but ~~not~~ Benth's P. ma-
crophylla, at least as to Macrae's
plant, from which his description
is principally ~~taken~~ ^{and which} drawn, I take
for a form of P. parviflora.

3. Phyllostegia brevidens, Sp. Nov.

P. ~~undique~~ glabra; foliis ovali-
bus argute dentato-serratis;
racemo laxo brevi simplici,
verticillastis ^{multis} ~~plurifloris~~; calyce
quasi truncato, ^{dentibus} ~~lobis~~ brevissi-
mis obtusis erectis; corollae ~~atque~~
tubo dorso pubescente calyce
duplo longiore (semi-pollicari).

Var. ? β . Ambigua: calyce glaber-
rimo magis dentato, dentibus

tubo quadruplo triplove
brevioribus; corollæ tubo
calyce triplo longiore (sub-
pollicari); foliis subtus nunc
parce pilosis.

Hab. Hawaii, in the forest
of Mouna Kea, at the elevation
of 3000 feet. Var. β ? West
Maui.

Branched, glabrous through-
out, except along the upper side
of the tube of the corolla. Leaves
membranaceous, 3 or 4 inches long,
 $1\frac{1}{2}$ to 2 inches wide, sharply ser-
rate, tipped with a small acu-
mination, obtuse or rounded at
the base, on slender petioles. In-
flouescence as in P. grandiflora,
(except in the smoothness) i.e. the pedi-
cels sessile or nearly so, but more
numerous, from 7 to 11 in each cyme.

Calyx turbinate-campanulate,
2½ lines long, repandly 5-toothed,
the teeth very broad and obtuse,
sometimes stronger, but ~~always~~
never as much as one quarter of
the length of the tube, not spread-
ing. Tube of the ^{white} corolla about
half an inch long; the large
patent lower lip about the same
length. Branches of the style
very short; the stigmas nearly
as in P. grandiflora.

The ^{doubtful} variety ambigua, - of which
we have only a single specimen, -
is ambiguous between the present
species and P. grandiflora, having
a corolla of ~~the same~~ about the size
and shape of the latter, and
most of the leaves are sparingly
pilose underneath. But these
~~leaves are sharply serrate, the~~
(calyces, pedicels (about 5 in each
cymule), &c. are perfectly glabrous,

and the calyx-teeth, although manifest and of the same form as those of P. grandiflora, are much shorter and hardly spreading. Stigmas as in P. grandiflora, but rather more unequal, the lower one larger. I have reason to think, but am not certain, that this is the same as a ^{specimen} ~~plant~~ which Menzies also gathered on Maui, which is preserved in the herbarium of the British Museum, and which Bentham referred to his P. Chamissonis:— in which case, should it prove to ~~not~~ belong to a distinct species, as is likely, it may be named P. Menziesii.

4. Phyllostegia glabra, Benth.

^(undique)
P. glaberrima; foliis ovatis ^(serratis) basi
rotundatis vel truncatis; racemo
laxo thyrsoides, cymulis pleris-
que pedunculatis trifloris; lobis
calycis parvulis breviter lanceola-
tis obtusiusculis vel obtusis tubo
dimidio brevioribus, fructiferis
vix ampliatis subpatentibus;
corolla tubo calyce 2-3-plo
longiore. — Variat calycis lobis
angustioribus acutis seu latioribus
obtusis vel obtusiusculis, fructiferis
raro tubo aequilongis; corol-
la subpollicari vel minore.

^(dimidio)
Prasium glabrum, Gand. Brt.

Joyce, Voy. p. 252, t. 64; ^{floribus} forma ^{magiore}
Phyllostegia glabra, Benth. in Brt.

Reg. no. 1292, & in Linnaea, b. p.

79; forma ramosior parviflora.

P. Macraei, Benth. in Ob. l.c., p.
554.

P. Chamissonis, Benth. in Linnaea,
l.c., Lab. p. 551, & in Ob. l.c.;
forma fl. majoribus.

Hab. Oahu, on the mountains
behind Honolulu, and in the
mountain defile across West Maui;
gathered by nearly all collectors
from ^{Nelson and} Gaudichaud to Penny.

Gaudichaud's Plate represents
the largest-flowered form; Benthams
P. glabra was described from ^{branched} speci-
mens ~~mostly with short racemes and~~
~~later~~ with smaller ^{and probably later} flowers.

The corolla "white tipped with pink".
varies much in size; but in none
of the specimens under examination
does it rival that of P. grandiflora;
~~common~~ in many it is only half an inch
in length. All clearly belong to one species;
and it is the only one with the cymules pedunculate, except

the dubious P. hisuta.

5. Phyllostegia parviflora, Benth.

P. molliter villosa ^(cula) vel pubescens;
foliis ^{seu ovato-oblongis} ovatis serrato-crenatis
basi rotundatis cordatisve;
^{glanduloso- seu viscoso-villoso} racemo laxo; verticillastris plerum-
que b-floris, pedicellis gracilibus;
calycis lobis ^{breviter} lanceolatis, ~~breviter~~
(tubo) 2-3-⁴-plo ^{brevioribus} fructiferis vix ampliatis subpaten-
tibus; corollae tubo puberulo
calyce 2-3-plo longiore (semipol-
~~Drusium parviflorum, Gand.~~
~~Bot. Frey. Voy. Frey. p. 453.~~
~~Ab.~~
licari).

Var. a. Gaudichaudi: foliis subtus
molliter ~~seu~~ mollissime pubes-
centibus; racemis saepe panicu-
latis; floribus parvulis; calyce ses-
quilineari; corolla gracili; pe-
dicellis saepius calyce ($1\frac{1}{2}$ -lin.)

multo longioribus (3-5 lin.)
nunc ~~eodem~~ ^{tantum} æquilongis.

Prasium parviflorum, Gand.
Bot. Freyc. Voy. p. 453, t. 65,
f. 1.

Phyllotegia parviflora, Benth.
~~in~~ in Linnaea, l.c. etc.

Var. β . glabriuscula: foliis caule=
que subpubescentibus vel glabra=
tis; floribus majoribus; pedicellis
calyce (2-3 lin.) 2-3-flo longioribus;
verticillatis interdum 8-floris.

Phyllotegia macrophylla, Benth.
l.c., præsertim pl. Macraei.

Var. γ . mollis: ^{undique} mollissime velutino=
pubescens, canescens; pedicellis
calyce brevioribus vel subæquali=
bus; corolla (4-5 lin.) ~~longior~~ calyce
duplo longiore.

Phyllostegia mollis, Benth. in
Linnaea, 6, p. 79, & in Ob. l. c.

Stat. Oahu and Maui, in
mountain forests; gathered by most
collectors. Var. β . Hawaii; not
in the present collection; but a speci-
men from the mountains behind
Honolulu connects it with the
~~type of the spec~~ first and ordinary
form. Var. γ . West Maui; speci-
men not well developed, more hoary
than the ordinary form, probably
growing under greater exposure.
Oahu specimens with ^{almost} ~~neatly~~
as short pedicels, ^{rather shorter calyx-tube,} and very soft
velvety leaves, ~~which~~ are quite
intermediate, showing that P.
mollis belongs here, and not to P.
clavata; the canescent form of which
is silky-hirsute, the ^{flowers larger and} ~~calyx~~ with appres-
sed strigulose pubescence, &c.

This is on the whole a large-leaved species, the amplex leaves being 6 inches, ~~with~~ and the petiole 2 inches, in length. The ~~variation in~~ diversity in the size of the flowers is hardly as great as in the preceding species. The corolla does not surpass half an inch in length, but is slender in var. α , thicker in β . ~~Abra~~ Upper branch of the style and its stigma commonly ~~smaller~~ smaller than the other.

6. Phyllostegia stachyoides, ^{Sp. nov.}

P. molliter pubescens; foliis ovato-lanceolatis ^{acuminatis vix basi} subcordatis crenato-serratis; racemo denso; verticillis ^{ambly-}tris 10-14-floris; pedicellis ^{glanduloso-pubescentibus} calyce brevioribus; lobis calycis ^{glanduloso-pubescentibus} subulato-lanceolatis tubo paullo brevioribus; corollae pubescentis tubo calyce duplo longiore.

Hab. Hawaii, in the District of Waimoa.

The single specimen is from a branching plant, with the leaves much like those of P. racemosa, but tapering to an acute point and scarcely subcordate at the base, the short and soft pubescence less dense. The raceme is more compact and leafless, ^{or} ~~and~~ spiciform, even the fructiferous pedicels seldom more than

a line and a half long. ~~to~~ ~~leaves~~
These are about five ~~from the~~ ~~and~~
in each fascicle, and destitute
of any common peduncle, as in
most species of the genus. Calyx
minutely pubescent and glandular,
3 lines long, ~~in~~ after flowering
4 or 5 lines long; the lobes lanceo-
late-subulate from a broad base,
more attenuate-pointed than in any
related species, rather rigid, some-
what spreading. Corolla slender,
probably white, rather thinly and
finely pubescent, half an inch
long. Style slightly clavate;
the subclavate lobes ~~unequal~~ and
stigmas unequal, the upper
stigma smaller. — Additional
specimens are wanted; but the
species appears to be a well-marked
one.

7. Phyllostegia clavata, Benth. l.c.

P. pubescens ^{vel} hirsuta pilis appres-
sis; foliis ovatis seu ovato-
lanceolatis subacutis basi ro-
tundatis vix subcordatis crenato-
serratis; verticillastis 6-14-floris;
pedicellis calyce subaequilongis;
lobis calycis strigosi late trian-
gulari-ovatis obtusis tubo triplo
brevioribus; corollae strigoso-pub-
escentis tubo calyce triplo
longiore; stylo apice clavato.
— Variat. 1. foliis glabriusculis
pedicellis fructiferis calyce 2-
3-plo longioribus, et 2. ~~villosior~~,
~~subineana~~ sericeo-villosa, canes-
cens, lobis calycis paullo majoribus.

Ital. Hawaii, in the forest of
Moua Kea, collected only by
Macrae, and, in the canescently

hairy form, by our naturalists.
The smoother form, apparently of
this species, was gathered on Mani-
by Kenny.

The leaves are larger than
in the next species, ~~and~~ more or less
acute or pointed, at most obscurely
cordate at the base, and with a
more minute pubescence. The
specimens in the present collection,
although manifestly of this spe-
cies, are much more hairy than
Macrae's. The younger leaves ~~under-~~
~~neath~~ and the calyx very densely
and canescently silky minute. As in
the following and other species, the
lower verticillastri, and in some spe-
cimens ^{nearly} all of them, are in the axils
of ordinary leaves; in others they
are crowded in a naked virgate ra-
ceme. Pedicels 2 or 3 lines long.
Calyx 2 or rarely 3 lines long. Corolla

when well developed!)
5 or 6 lines long, with a rather
thick and strigosely hairy or silky
tube. Style more clavate than
usual at the summit; ~~the~~ ^{the} its
upper lobe smaller, and with its
stigma often abortive.

8: Phyllostegia racemosa, Benth. ^{l.c.}

P. ^(villosula sensu) tomentuloso-pubescent; foliis
oblongis ~~sensu~~ ovato-lanceolatisve
obtusis basi sapissime cordatis
crenatis; verticillastris 8-12-floris;
pedicellis brevissimis; lobis calycis
tomentulosi ovatis obtusissimis
tubo dimidio brevioribus, fruc-
tiferis ~~tiferis~~ ^{arctis} patentibus;
^{pubescente} corolla calyce diplo longioribus.

Stat. Hawaii, in the forest of
Moua Kea, where it was discovered

by Macrae.

Stems or branches ^(slender) elongated and ascending, with a fine and soft pubescence. Leaves small, only one or two inches long, with the petiole 3 to 6 lines long; the lower floral ones similar, the upper gradually decreasing; the one to 3 lower verticillastri often remote and shorter than their subtending leaves. Pedicels barely one line, or at length a line and a half long, the fascicle sessile. Calyx 2, or at length 3, lines long, the very obtuse and foliaceous lobes at length almost as long as the tube. Corolla fully 4 lines long when well developed, white. Branches of the style ^{often} unequal, the upper one smaller, as in P. clavata.

9. Phyllostegia haplostachya, Sp. nov.

P. cano-tomentosa; foliis cordato-
oblongis seu cordato-lanceola-
tis crenatis; verticillastis bifloris,
floribus subsessilibus in spicam
simplicem virgatam digestis;
calycis dentibus lato subulatis
erectis tubo 3-4-plo brevioribus;
corolla tubo longe exserto, lobis
~~marginibus~~ crispis.

Var. β . leptostachya; foliis ~~minoribus~~,
foliis angustioribus e basi
leviter cord minus cordata,
pagina superiore calycibusque
minutim tomentulosis nec albis
incanis; floribus inferioribus
dissitis.

Hab. In sands of the low

is thinnus on Maui. Also collected by Kery on Hawaii.
Var. β . On barren ridges of
Kauai.

Stems erect, branched ^{near} ~~at~~
the base, apparently only one or
two feet high, white-tomentose,
~~leafy to near~~ Leaves rugose-
veiny, 2 or 3 inches long, and one
or 2 inches broad at the deeply
cordate ^{cordate} (or in the uppermost leaves truncate
or slightly cordate) base, thence
tapering to a blunt or bluntnish
apex, evenly crenate; the lower
surface softly tomentose, in the
Hawaiian specimens of Kery very
densely and whitely so, in ours
from Maui only canescent; the
upper surface greenish and finely
velvety. ^{Petioles 10 to 18 lines in length,} Floral leaves all reduced
to linear-lanceolate or subulate bracts,

The lowermost equalling the calyx,
the others much shorter or minute.
The spike therefore naked and
more or less pedunculate, from
3 to 6 inches long. Flowers in all
instances solitary, in the axil of
each bract, almost sessile, or
the pedicel barely a line long.
Calyx ^(3 or 4) ~~fully~~ 3 lines long, cyl-
indraceous, densely white-tomen-
tose, a little curved and the
flower horizontally spreading in
anthesis; the teeth nearly equal,
a line in length, broadly subulate,
rather acute, erect or connivent
in fruit and not accrescent. Corol-
la tomentose-pubescent externally,
"white"; the tube nearly straight,
8 or 9 lines long; the lips less un-
equal than in other species, the
upper one and the three lobes of
the lower ~~are~~ rotund and with

strongly undulate - crisped margins, the lower lobe at length exceeding the lateral ones. Filaments hairy, as in the ~~rest of the~~ ~~genus~~. Other species. Anthers of the genus. So of the style, which however is ~~often~~ sometimes sparingly hairy towards the summit; it is ^{somewhat} clavately thickened ~~upward~~ above, and the short lobes are clavate and terminated by the truncate-dilated stigma of the genus. In one instance the lobes of the style and the stigmas were found to be connate ~~into~~ or confluent into one. Achenia ~~geminately subconnate~~ somewhat coherent in pairs, ~~app~~ probably drupaceous, but very thick and suberose-crustaceous, hairy at the summit, included at maturity in the then ovoid and nearly

closed calyx, instead of being
exposed ^{or protruding from,} in ~~an~~ open or expanded
calyx as in the other sections
of Phyllostegia.

In the variety leptostachya, -
to which the Hawaiian specimens
approach as to the foliage, - the
leaves are smaller as well as
generally narrower (1½ to 2 inches
long and 6 to 9 lines broad at the
less cordate, or in the uppermost al-
most truncate, base), less velvety
or glabrate above, but densely
white tomentose beneath, the
margins finer crenulate; the
pairs of flowers are more separa-
ted (the lower an inch or more
apart) and perhaps more spread-
ing, and the calyx finely tomentu-
lose, instead of white-tomentose. Fruit
unknown. Possibly it is of a distinct
species; but probably not.

This ^(species) and the nearly related P. trunc-
ata, of Kemy's collection would natural-
ly be taken for the type of a distinct
genus; but I find no sufficient reason
for their separation.

10. Phyllostegia floribunda ^{l.c.} Benth.

P. villosa-hirsuta; caule rigido; foliis ellipticis seu oblongo-oratis acuminatis crenato-serratis basi rotundatis vel obtusis; racemis brevibus plurifloris ex ~~axillis~~ axillis foliorum inferiorum, rhachis pedicellis ~~que~~ filiformibus calycibusque patentibus hirsutissimis; calycis lobis linearibus tubo ~~max~~ ^{sub} ~~equi~~ ^{longis} ~~longis~~ ^{sub} et corollae "late violaceae" subaequilongis.

Hab. Hawaii, in woods of the District of Puna. Before known only from the specimen gathered (probably on Hawaii) by Nelson in Cook's last voyage, and preserved in the Banksian herbarium.

Stem probably herbaceous:
it is recorded as rigid, upright,
18 inches to two feet high.
Leaves thin and membranaceous,
from $2\frac{1}{2}$ to 7 inches ~~long~~, with
the petiole one or two inches, in
length. The inflorescence arises
from the axils of the lower, then
mostly fallen, leaves, and consists
of nearly sessile ^{setosely hairy,} and leafless, ra-
cemes, not cymes, in our speci-
mens, and I believe in Nelson's
also, although in that the flowers
are more numerous and crowded.
Pedicels in our plant solitary in
the axil of each bract, in fruit 5
or 6 lines long; the bracts $1\frac{1}{2}$ to 3 lines
long, the lowest and larger ones
oblong or lanceolate and ~~so~~ foliaceous.
Calyx 3 lines long, the tube at
first cylindric, in fruit open-
campanulate, the lobes ^{equal,} long and

slender. Corolla 4 or 5 lines long,
"deep violet and ornamental", slightly
pubescent, in conformation similar
to that of P. parviflora, ^{as likewise are} the style
and stigmas, ~~similar~~ Achenia
fleshy, projecting ^{the open mouth of} from the pre-
tiferous calyx.

21. Stenogyne, Benth.

The corolla is more or less hairy or downy externally towards its summit in all the species, while the lower part of the tube is apt to be glabrous or glabrate, ^{It is mostly rose-color or pink;} its lower lip is ~~never longer and rarely as long~~ indeed are sometimes "subequal"; but in this genus it is the upper, not the lower, lower lip which is the larger, in some species strikingly so when fully developed, as in the small-leaved section, where the erect or more or less falcate incurved upper lip produced much beyond the short ~~lower~~ and three-cleft lower one, calls to mind the corolla of a Castilleja. The bearded annulus is wanting in S. rotundifolia and S. cordata, - therefore probably in S. sessilis, - and nearly so in what

I suppose to be S. macrantha. The
stamens equal the upper lip, or
are exerted beyond it. ^{Known}
[For a conspectus of the species,
see Proceed. Amer. Acad. 5, p.]

1. Stenogyne rotundifolia, Sp. Nov.

caulibus basi suffuticosis aceto
tetragonis ad angulos praesertim
cum petiolis retrorsum hirsutis;
foliis ^{glabris} rotundis crenatis basi trunc-
catis vix subcordatis; verticillastis
bifloris; pedicellis petiolo dimidio
brevioribus calyce glabro breviter
dentato subaequilongis; filamentis
villosis; corolla exannulata extus villosa.

Hab. East Maui, Sandrich
Islands, on the banks of the crater
of Mauna Haleakala.

Stems ^{or branches} erect or ascending, ~~square~~,
from an apparently woody base,
nearly simple, rigid,
about a foot high, square, hirsute
with short and rather rigid hairs, at
least on the angles, where the pubes-
cence is strongly retrorse. Leaves an

inch or a little more in length, ^{and}
conspicuously petioled, elliptical-
obicular, often retuse at the round-
ed summit, either truncate or
obscurely subcordate at the base,
coriaceous in texture, sprinkled
with some scattered hirsute hairs,
at least when young,
otherwise glabrous: the petiole half
an inch long, hirsute with long
and reflexed hairs, or at length gla-
brate. Flowers axillary, as in the
genus generally. Peduncle more or
barely discernible; the setaceous
bracts rather conspicuous. Pedicels
1½ or 2 lines, or in fruit fully 3 lines
in length, ^{sparingly hairy,} Calyx campanulate,
perfectly glabrous, or rarely with one
or two short scattered hairs, 3 lines
long, very obscurely nerved; the
limb scarcely oblique; the teeth as
short and broad as those of *S. scirpular-*
oides. Corolla 10 lines long, villous

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externally with a soft down, the throat little dilated and slightly oblique, the spreading lower lip a little shorter than the erect upper one. Stamens moderately exserted beyond the upper lip; the filaments bearded with long villous hairs. No annulus ~~to~~ in the tube of the corolla, ^{marked} ~~Achenia~~ drupaceous, disposed to cohere in pairs, the putamen very thick and crustaceous.

Apparently a well-marked species,
and most related to no. 381 of
Kenny's collection, which I take
to be a form of S. macrantha
of Benthams, although it has
smaller flowers and apparently
smaller leaves than Macrae's.

plant is described as having.*

* The following character is drawn from the plant of Kuny's collection:

Sterogyne macrantha (Benth.?).
pilis patentibus indigne molliter
hispidis; foliis subrotundis vel ovatis
crenatis basi saepius cordatis sub-
membranaceis longiuscule petiola-
tis; verticillastris b-floris; pedicellis
calyce 5-lobo aequilongis, utrisque
hispidis; filamentis subnullis;
corolla (subpollicari!) extus fere
granulata extus sericea. — Hawaii,

Kuny, no. 381. — Divergently branched;
the hairs, at least on the stem, with papillose-dilated bases.
Leaves $1\frac{1}{2}$ to $2\frac{1}{2}$ inches long; the petiole 5 to 12
lines long. Calyx $4\frac{1}{2}$ to 5 lines long; the lobes more or less
unequal, about 2 lines long, or the larger 3 lines
long in fruit. Corolla not quite an inch long,
~~in shape like S. scaphularioides~~ oblique at the
dilated orifice, and with the lower lip decidedly shorter
than the upper, whereas Macrae's plant is said to have
"labio superiore vix inferiore brevior". Antherus reduced to
five minute hairy tufts. Filaments slightly exceeding the
upper lips, obscurely pubescent.

2. Sterogyne cordata, Benth.

(vel nisi nodos barbatos glabra;
S. glabrata, foliis subpetiolatis
ovatis basi pl. m. cordatis; ^{crenulatis} Verticil-
lasteris 2-floris; cal. pedicellis
brevissimis; calyce quin inaequa-
li, lobis acutis, anticis tubo
subaequilongis; ^{calicibus} corolla exan-
nata, labiis fere equilongis.
~~Variet caule ^{dequantitate} ascendente vel~~
~~erecto, runc~~

Sterogyne cordata, Benth, Lab.
p. 654, & in Ob. Prodr. 12, p. 555.

Hab. Hawaii, in the District of
Maimea, and on the mountains of
West Maui. Before only known in
Nelson's collection, made in Cook's
last voyage.

Plant only a foot or two in height,
sometimes glabrous or nearly so, except

the nodes and the short petioles (these only a line long) which are bearded, and the pedicels (barely 2 lines in length) hirsute; in other specimens the ^{calyxes} leaves, &c. are sparsely hirsute. Branches slender, rather acutely 4-angled, very leafy. Leaves about an inch long, somewhat coriaceous, nervose-veined, mostly acute, slightly cordate. Flowers about equalling or the upper exceeding the leaves. Calyx .5 or 6 lines long, the elongated-campanulate tube nervose; ~~quite~~ the limb bilabiate, and a little more deeply cleft between the two anterior lobes, which however are a little shorter than the much less deeply cleft or barely three-toothed upper lip. The lobes or teeth ovate-triangular or triangular-lanceolate, all acute or pointed.

Corolla 9 or 10 lines long, canescently pubescent externally, or glabrate towards the base of the tube; the dilated throat little oblique and the lower lip ~~about~~ as long as the upper, its middle lobe somewhat exceeding the lateral ones: no trace of an annulus. Filaments not exceeding the upper lip, scarcely pubescent.

The nearly related S. sessilis has been collected only by Muir. The specimens, in the Banksian and Hookerian Herbaria, have larger, rounder, more rugose, and more closely sessile leaves than those of the present species. ^(the lobes of the calyx broad and obtuse, and the young corolla larger; the stem hairy in the angles) I know not whether the corolla is equally destitute of an annulus.

Stenogyne calaminthoides, Sp. Nov.

S. subglabra; caulibus decumben-
tibus vel repentibus tetragonis
ad angulos retorsum hirsutis; foliis
rotundo-ovatis crenatis basi sub-
cordatis ^{longiuscule petiolatis} truncatisve subflaccidis;
Verticillastis 6-8-floris; Pedicellis caly-
cem vix aquantibus; dentibus caly-
cis obtusis brevissimis; corollae
elongatae superne puberulae labiis
fere aquilongis.

Hab. Hawaii, in the forests of
Mouna Kea and near the Lua Pele.
also collected by Kunze.

Stems elongated, ^{(often simple,} square, usually
more or less hirsute pubescent or puber-
ulent on the sides, always retroscely
hairy on the angles. Leaves one or
two inches long, 9 to 18 lines broad, obtus,
rather membranaceous, glabrous or mi-

mentely and sparsely hairy, appearing
glabrous to the naked eye: Petioles
4 to 6 lines long, pilose-ciliate. Pedicels
in fruit 3 or 4 lines long, glabrous,
as is the calyx; the latter 4 to 5, or
in fruit even 6 lines long, with ob-
scure veins, resembling that of the fol-
lowing species, but more elongated,
and the teeth (a line or a line and a
half ~~to~~ in length) broader and rounder,
and less unequal. Corolla above
an inch long, strongly incurved,
gradually dilated upwards, probably
purple, the lower part glabrous, and
the short lips almost equal in length.
Filaments equalling the broad upper
lip, slightly hairy. Anthers of the ~~cor~~
corolla strongly bearded.

A well marked species, allied both to
S. rotundifolia and to S. scrophularioides.

Stenogyne scrophularioides, Benth. ^{l.c.}

S. glabra, divaricato-ramosa; foliis
ovatis ~~seu ovato-oblongis~~ acutis
serratis basi rotundatis vel trunca-
tis subflaccidis, petiolo gracili; ver-
ticillastris saepissime 6-floris;
pedicellis calyce breviter dentato lon-
gioribus; corollae superne pubescens
labiis subaequilongis.

Var. β . foliis oblongo-ovatis saepius acu-
minatis argutius serratis floribusque
majoribus.

Stenogyne Nelsonii, Benth. Lab.
p. 55, & in Db. l.c.

Phacopsis montana, Nutt. in Herb.
book.

Hab. Hawaii (and Oahu, Nuttall);

in forests, gathered by most collectors; the variety β , collected by Nelson, Kuny, &c. not in the present collection.

The ^(specimens) ~~plant~~ of the present collection, gathered in the ascent of Moma Kea, is exactly that of Macrae; the leaves thin and flaccid, ovate, mostly acute, 12 to 18 lines long, with the slender petiole about half an inch long. Calyx 3 lines long, nearly nerveless, and with short, obtuse, more or less unequal teeth. Corolla 7 to 9 lines long, purple or pink, ^(when developed) glabrous or glabrate for the greater part of its length, but the limb silky-pubescent externally, especially in the bud. Filaments somewhat exceeding the upper lip, slightly hairy below. The plant of Menzies (which appears to be ~~exactly~~ Nuttall's Chapman's montana) is intermediate between the former and

the Nelson's plant upon which
S. Nelsoni was founded. This last
has larger, more paper, oblong-
ovate and acute, sharply serrate
leaves (as ~~are~~ the larger 3 inches long)
and ^{the calyx disposed to be bilabiate through the} ~~larger~~ ^{upper lobes of the} flowers, ~~the~~ corolla as
large as in my S. calaminthoides,
and glabrate; and the stamens
are more exserted. Kuny's no.
³⁹⁶ 396 is about the same thing; but
the corolla, an inch long when
developed, and then mostly glabrate,
is canescently silky-pubescent in
the bud. The annulus is strongly
bearded.

Stenogyne rugosa, Benth. l.c.

S. saepius glabra vel glabrata; foliis coriaceis rigidis oblongis sen ovato-oblongis basi rotunda- tis vel truncatis petiolatis cre- mato-serratis reticulatis nunc rugosulis; verticillastis plerumque b-floris; pedicellis calyce breviori- bus; calyce ^{sub} inaequali, lobis saepius mucronato-acutis vel acutissimis tubum subaequan- tibus; corollae ^{breviscula} labio inferiore paullo breviore. - Variat. 1, foe omnino (corollae excepta) glaberrima, laevis, sen pedicellis calybusque hirsutulis; 2, hirsutu- la vel hispidula, foliis nunc ru- gosioribus asperulis; 3, pube brevi molli induta, verticillastis b-10- floris.

open and pastoral

Tab. Hawaii, in the ~~forest and~~^{open} region of Manna Kea, &c. ascending to the elevation of ⁹⁷⁰⁰~~4000~~ feet; ~~or more~~; also below on the coast. Apparently common: collected by Menzies, Macrae, and Kenny.

A well-marked species under all its variations as to pubescence, smoothness, or rugosity, but ~~rare~~ seldom deserving its specific name. Stems ^{and one to three feet high,} mostly erect, sometimes decumbent, obtusely angular or subterete, usually very smooth, herbaceous, ~~are~~ very leafy. Leaves from $1\frac{1}{2}$ to $3\frac{1}{2}$ inches long, with a petiole from half an inch to an inch in length, ^{usually acute,} sometimes thin and, but commonly thick and rigid as if growing in exposed places, ~~more~~ strongly nervose-veined and ~~very~~ finely venulose-reticulated, often not at all

rugose; and very smooth, some-
times rugose and rough, either
perfectly glabrous, slightly hispid
beneath or on both ~~sides~~ surfaces,
or in one form, from the district
of Waima (probably near the
coast) finely and softly downy,
especially underneath, as are the
branches, pedicels, and calyx; ~~the~~
^{in shape varying from oblong-ovate to oblong lanceolate,}
^{traces of hispidity} Pedicels $1\frac{1}{2}$ to 3 lines long. Calyx 4 to
5, or ~~in fruit~~ at after anthesis even
6 lines long, prominently ^{nervose,} ~~5 or 6~~
~~nerved~~ the lobes $1\frac{1}{2}$ to $2\frac{1}{2}$ lines long,
at length rigid and more or less
pointed, sometimes the two lower
rather ~~blunt~~ obtuse in flower;
the three upper more or less united,
^{"pink or rose-colored,"}
Corolla 8 or 9 lines long, barely
twice the length of the calyx,
^{or only pubescent,}
~~externally~~ appressed-pubescent,
except the lower part of the tube,
^{annulus within strongly bearded;}
which is glabrous; the dilated throat

oblique, and the lower lip manifestly shorter than the upper. Filaments about the length of the upper lip, minutely glandular below.

An imperfect specimen from the mountains of Karai appears to belong to the second form of this species, except that the fructiferous calyx is less ~~more~~ evidently nerved, and its teeth are shorter.

G. Stenogyne angustifolia. Sp. nov.

S. glaberrima; caulibus fili-
formibus, ^{sarmentosis} ~~sapius~~ procumbe-
ntibus; ~~vel ses~~ foliis coriaceis
oblongo-linearibus seu lineari-
lanceolatis crenulato-serratis ^{bas}
in petiolum angustatis; verticillas-
tis bifloris; floribus fere praece-
dentis, lobis calycis inferioribus tubo
paullo longioribus; corolla glabrata.

Stat. Hawaii, in the District
of Waimea, probably at no great
elevation; also collected on Hawaii

by Kemy.

Stems extensively procumbent, decumbent, or sarmentose, slender. Leaves one or 2 inches long, 3 to 5 lines wide, mostly obtuse, thick and coriaceous, smooth, ~~opaque~~ dull, the petiole 3 to 5 lines long. Bracts, pedicels, &c. as in S. rugosa; but the latter solitary in the axils; the narrow calyx rather narrower, half an inch long, and the lobes broadly lanceolate, the two lower rather longer than the tube, the three upper ~~slight~~ united usually about half way up; the corolla almost glabrous, more nearly so than I have seen it in S. rugosa.

This is perhaps an extreme form of the last; but Kemy's specimens accord with ours in all respects; and the long trailing stems, narrow leaves with a ~~superior~~ contracted base, and solitary flowers are peculiar.

(quite)

7. Stenogyne microphylla, Benth. l.c.

S. glabra, diffuso-ramosissima, sub=
scandens; foliis parvis oblongis ^{grosse}
serratis vel incis basis in pe=
tiolum marginatum angustatis;
verticillastris bifloris; corolla extus
puberula, labio superiore fal=
cato ~~per~~ longe producto; stamin=
ibus exsertis.

Stat. Hawaii; on Mouna Kea
(where it was discovered by Macrae);
commencing in the forest at the ele=
vation of 5000 feet and extending to
9500 feet, in the pastoral District.
"Full of branches, climbing", glabrous,
except a minute hairiness at the nodes
and in lines on some of the ultimate
branchlets (especially in more rigid
specimens gathered by Kerry). The branches

square. Leaves from 3 to 6 lines long, including the margined petiole, either submembranaceous or more rigid, acute, or sometimes obtuse, veiny, strongly and commonly sharply serrate or pinnatifid-incised. Pedicels solitary in the axils, one or two lines long, subtended by a pair of setaceous bracts. Calyx 3 lines long, strongly nerved, at least in fruit, campanulate, ~~somewhat~~ unequally 5-lobed in the manner of the genus; the lobes ovate-lanceolate, acute or acutish, nearly the length of the tube. Corolla about 7 lines long when fully developed, "green", externally minutely pubescent; the tube only a little surpassing the calyx, the ^{upper} ~~upper~~ portion with the narrow upper lip (3 or 4 lines long) falcate-incurved, very much exceeding the ^{broad and} three-lobed lower lip: anulus within conspicuously

bearded. Filaments and style at
length surpassing the upper lip.
Fruit, &c. as in the genus, in which
this and the two following closely
allied species compose a ~~good~~
~~distinct~~ notable section.

8. Stemogyne crenata, Sp. M.

S. hispida, ramosissima, foliosissima; foliis parvis oblongis seu ovalibus obtusis grosse crenatis breviter (nunc brevissime) petiolatis; verticillastris bifloris; corolla extus hispida, labio superiore longiuscule producto; staminibus exsertis.

Hab. Mani, on ~~the~~ crater of Mouna Haleakala, "from the elevation of 5300 to 9500 feet".

Differs from the preceding in the hispid ~~for~~ hairiness, which is retorse ~~on the~~ and aculeolate on the acute angles of the stems; in the obtuse and crenate ~~of thick~~ leaves, some of which taper into a marginated petiole, while others are abruptly con-

ted or rounded at the base, some with very short petioles or hardly any; and there^{re} is less inequality in the lips of the corolla. Lobes of the calyx as long as the tube, rather obtuse. The branchlets in the specimen are not divaricate, but almost erect.

9. Stenogyne diffusa, sp. nov.

S. molliter villosa-pubescentis,
divaricato-ramosissima; foliis
parvis rotundis grosse crenatis
basi truncatis vel subcordatis
petiolatis; verticillastis bifloris;
calycis lobis obtusis; corolla extus
pubescente, labio superiore longe
producto; staminibus exsertis.

Hub. Hawaii, District of Wai-
mea; in forest.

This has the habit of S. microphylla, but is downy all over, and the small leaves are round and abruptly petioled; the blade-lamina $1\frac{1}{2}$ or 2 lines long and wide, coarsely crenate or ~~even~~ obscurely 7-lobed; the rather slender petiole a line or a line and a half in length. Pedicels of the same length. Calyx as in the preceding, but more bilabiate or oblique, and the outer lobes obtuse. Corolla when fully developed 8 or 9 lines long ~~maroon~~ than in S. microphylla, less incurved, but falcate; its upper lip similarly produced (becoming 3 lines long), the short lobes of the lower one rather acute. Stamens at length

conspicuously exserted. Annulus
of the corolla strongly bearded.

On the North bank of the great
crater of St. East Marie was
gathered a specimen, ~~the~~ without
flowers or fruit, of what is likely
to be another species of this small-
leaved section of Sterogyne. The
leaves, however, are larger (half an
inch long, besides the naked petiole
a quarter of an inch long), ovate-sub-
cordate or deltoid, ~~and~~ incisely or
laciniately lobed, and with the
diffuse branches cinereous-pu-
bulent.

22. Prostanthera, Labill.

1. Prostanthera Sieberi, Benth.
2. Prostanthera denticulata, R. Br.
3. Prostanthera marifolia, R. Br.

Hab. New South Wales, all gathered in the vicinity of Sydney.

23. Hemigenia, R. Br.

1. Hemigenia purpurea, R. Br.

Hab. Sydney and Hunter's River, New South Wales. The species includes, H. Sieberi, Benth., as the forms collected clearly show.

24. Westringia, R. Br.

1. Westringia rosmariniformis, ^{Smith.}

Hab. Sydney and Hunter's River,
New South Wales.

25. Teucrium, Linn.

1. Teucrium bicolor, Smith.

Hab. Chili; frequent on the
ridges of the mountain slope back of
Valparaiso, forming a many-stem-
med shrub from 3 to 6 feet high.

2. Teucrium inflatum, Swartz.

Hab. Freije Island, on Vanna-
levu and Muthuata, in cultiva-
ted ground. (Collected at Sandy by Dr.
Harvey.) Also recorded, among intro-

duced plants, by Dr. Pickering
at Tongatabu, where it was
long ago found by Forster. This
tropical American species, allied
to T. Canadense, has not been
met with ~~at~~^{on} any intermediate
~~for~~ islands.

3. Tencrium argutum, R. Br.

Var. β . pinnatifidum: foliis lacini-
iato-pinnatifidis vel sub-bi-
pinnatifidis,

Hab. Hunter's River, New
South Wales.

Except in the incision of the
leaves, which are incisely and
even doubly pinnatifid, this
accords with Brown's T. argutum,
so far as can be judged from
the examination of a single dwarfed

specimen.

4. Tenacium betonicum, ^{L'Her.} 1

Stat. Madeira, on rocks at
the Corral.

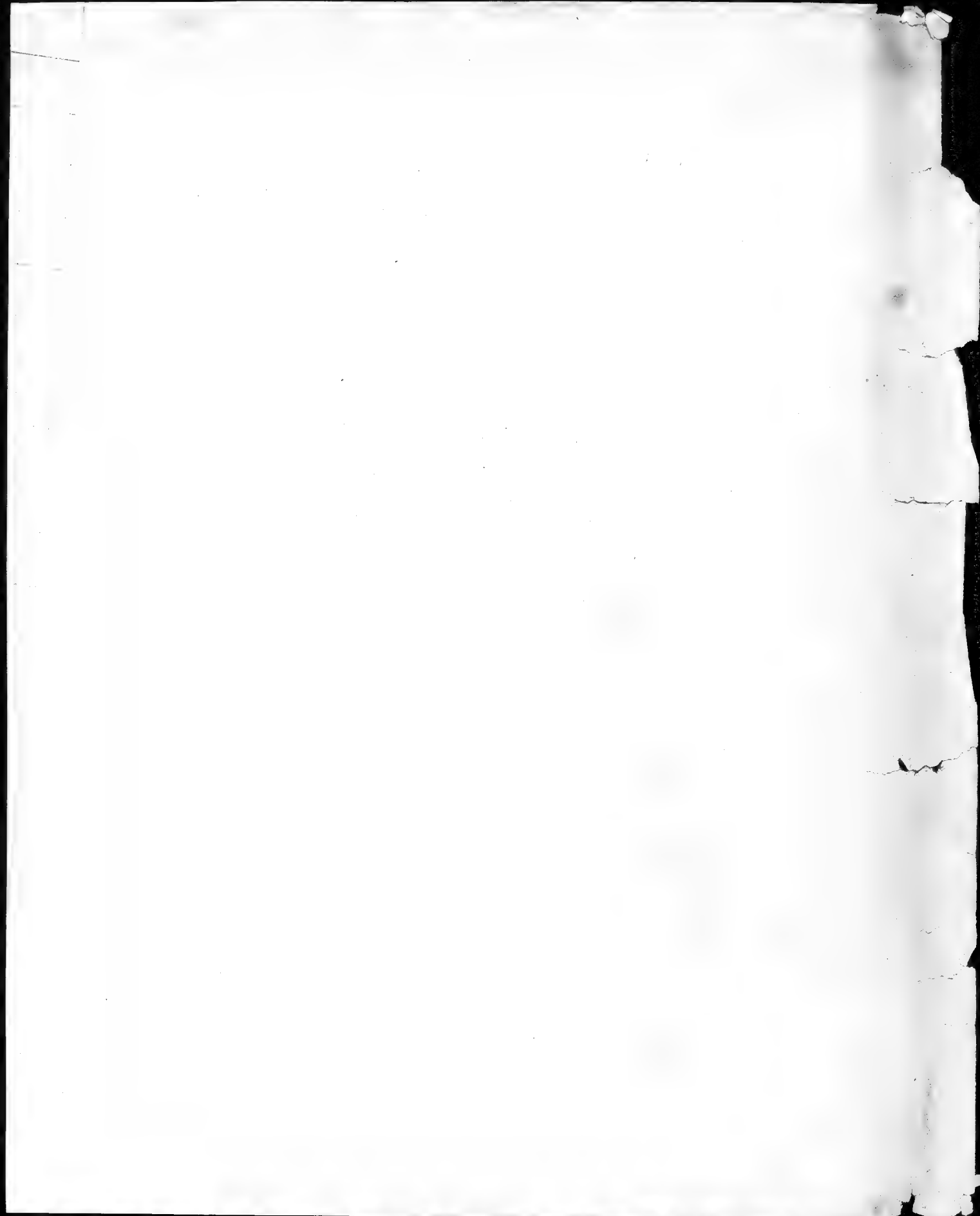
26. Ajuga, Lin.

1. Ajuga Iva, Schreb.

Stat. St. Jago, Cape de Verde
Islands; on rocks.

2. Ajuga australis, R. Br.

Stat. New South Wales, at
Hunter's River.



Ord. Plumbaginaceae,

Statice Brasiliensis, Boiss. in
Dc. Prov. 12, p. 644, — probably a
false form of the variety antarctica, and
more variety of S. Limonium, Linn.,
was collected at the mouth of Rio
Negro, North Patagonia.

Armeria vulgaris, Willd. the
form named A. Macleaniana, Cham.
was collected ^{and near} on the sea-coast, and
a dwarf variety of it (S. Armeria
var. alpina, Hook. f.) on mountain
summits, at Orange Harbour,
Tasmania.

Plumbago scandens, Linn.,
at Rio Janeiro ^{Pem near} and at Lima.

Plumbago canulea, H. B. K.,
from near Olajillo, Pem.

Plumbago Zeylanica, Linn.,
from the Sandwich, Society, and Feejee
Islands

Plumbago rosea, L. (P. coccinea,
Boiss.), from Luzon, in the vicin-
ity of Manila.

Ord. Plantaginaceae

Plantago major, Linn. was
picked up at Madeira and St.
Jago, Cape de Verde Islands.

Plantago lanceolata, Linn.,
~~also at Madeira.~~

— Plantago Lagopus, Linn., P.
arborescens, Poir., and P. bivaropis,
Linn., at Madeira.

Plantago Virginica, Linn., the
~~short-stem~~ more frutic form with
short stamens and corolla closed
after flowering, from Rio Janeiro
and the Argan Mountains, Brazil,
answering to I know not what Brazil-
ian species in the Prodrums. (P. brachys-
tachys, Kunze, appears to be a substerile
form of this species.)

Plantago hirtella, HBK., glabrate
forms, from Rio Negro, North Patagonia,

Chile and Peru; also var. biglyana, from the Andes of Peru,
vide infra, no. 3.

~~the perennial root.~~

Plantago maritima, Linn., var.
juncoides (P. juncoides, Lam.), - answer-
ing to the plant of the eastern coast of
North America, - from ~~the~~ the mouth
of the Rio Negro, North Patagonia.

Plantago pauciflora, Lam.,
in various forms, from Fuegia. vide
infra.

Plantago uncialis, Decaisne, from
the snow line on the Andes of
Chile. vide infra.

Plantago tumida, Link (prob-
ably only a form of P. hispidula,
Kunz & Pav., distinguished from P.
sericea by the annual root, therefore
probably a form of the polymorphous

P. Patagonica), from Chile near Valparaiso,

● Plantago sericea, Ruiz & Pav., to which Weddell has happily reduced most of the perennial American of this section in the Prodrromus (the annual ones being equally reducible to P. Patagonica), from the ^{Andes} ~~mountains~~ of Peru above Baños.

Plantago nubigena, St. B. K., from the high Andes of Peru, ^{above} ~~above~~ Baños, and at Casa Cuncha, B. i.

and it would seem probable, from Dr. Pickering's memorandum, that P. rigida, St. B. K., was also noticed in this region, out of flower, and not collected.

Plantago princeps, Cham. Schlecht. (including P. Inulniana, Gand., and several marked varieties), from the Sandwich Islands. vide infra.

Plantago pachyphylla, sp.
nov., with several varieties, from the
Sandwich Islands. Vide infra.

● Plantago varia, R. Br. from Hunter's
River, New South Wales.

Plantago hispida, R. Br., Syd-
ney, New South Wales.

Plantago debilis, R. Br., Sydney,
New South Wales.

Plantago, Linn.

1. Plantago pauciflora, Lam.

Plantago pauciflora, Lam. Ill.

Gen. 1, p. 342; Koem. & Schult.

Syst. 3, p. 138; Barneoud, Plantag.

^{excl. var. a.} p. 17; ~~Decaisne in Gay Ill. Chil. 5, p. 204.~~

P. barbata, Forst. Comm. Goett. 9,

t. 4; Hook. f. Fl. Antarctic. 2, p.

727; Decaisne in DC. Prodr. 13,

p. 727; ~~Wedd. Chilor. And. 2, p. 140.~~

P. polymorpha, Banks Island.

in bibl. Banks, cum icone, — no-
men aptum sed ineditum.

P. monanthos, D'Urville in Mem.

Ac. Linn. Par. 4, p. 606; Gaud.

Bot. Voy. Freyc. p. 133; Barneoud,

l.c. excl. syn.; Hook. f. l.c. p.

340, t. 121.

~~Wedd.~~

~~P. uncialis, Decaisne in Gay, Ill. Chil. l.c. p. 204.~~

Stab. Grange Harbour, Tuz-
gia; the var. laxa (P. monanthos
a, Hook. f.), abreviata, muscoides
● P. monanthos var. muscoides, Hook.
f.) and barbata (P. barbata,
Forst., Hook. f. var. a.); the var. musc-
coides, "congested into a carpet-like
surface, marked out into stars by its
radiating crowns of short rigid leaves,
only on mountain summits."

~~With a~~ ^{antarctic plants} The questionably these
are all forms of one species. The
distinctions between P. barbata and
P. monanthos were reduced by
Dr. Hooker to two, viz. the want
of beard at the base of the leaves in
the latter, and the broader and shorter
basal part of the dehiscent capsule,
scarcely exceeding the calyx, in the
former. The ^{first-mentioned} ~~former~~ character would
~~should~~ be expected to break down

on consideration of Dr. Hooker's varieties, and of what we know of ~~the~~ ~~in~~ other species; and it does not coincide with the other ^{character,} For our good fruitful specimens of P. barbata have the funnel-shaped persistent portion of the capsule twice or thrice the length of the calyx; and our specimens of P. monanthos, ^{from} Hooker's collection on Hermit Island, ~~with entire narrow leaves,~~ show an abundant beard or wool at the base of the younger (long, narrow, and entire) leaves. Decaisne's distinction from the wules and sud is invalidated by Dr. Hooker's excellent figures, which give to P. monanthos four seeds in each cell. Forster's specific name of barbata, being inapplicable to the whole species, and not very much ~~so~~ earlier than Lamarck's may give way to the latter.

I hesitate to adduce Chilean
synonyms, having no specimens
referred to this species ^{from anywhere} north of Fue-
•gia; and the following related species
is manifestly distinct.

2. Plantago uncialis, DeCaisne

Plantago uncialis, DeCaisne, in
Barneud, Plantag. p. 42, & in
Dc. Prodr. l.c.

P. pauciflora var. major, Barneud,
l.c. p. 17?

P. barbata var. uncialis, Wedd.
Chlor. And. 2, p. 160.

P. andicola, Gillies, in Herb. Hook.

Hab. High Andes of Chili,
above Santiago, close to the snow.

The caespitose rhizomata are
thick, and even a very stout fusi-

from root. Leaves glabrate, thick
and rigid, ~~obtusely~~ lanceolate-
linear, rather obtuse, many of
• them sparingly toothed, sometimes
^{white-woolly in the axils,} strongly so, Scapes in fruit
an inch or an inch and a half
long, exceeding the leaves, gla-
brate, 2-4-flowered in a capitulum.
Bracts orbicular-ovate, concave,
very obtuse, ^(glabrous & nearly) scarious, ~~about~~ the
length of the broadly ovate and very
obtusely ^{often mucronulate} sepals. Lobes of the corolla
reflexed in fruit, broadly ovate
and as if subcordate, obtuse.
Capsule globular-ellipsoidal, 4-
seeded, dehiscent below the mid-
dle, the persistent portion only
half the length of the sepals.
The latter character appears to distin-
guish the species well from *P. bar-*
bata, possibly some of Dr. Hooker's varieties
of the latter belong here.

3. Plantago Mirtella, H.B.K.

Var. β . Orbignyana: nana, Mir-
• tello-prubescens vel Mirsuta;
foliis saepe laciniato-dentatis;
spicis brevibus.

Plantago Orbignyana, Wedd.
Steink. ex Decaisne in DC.
Prodr. 13, p. 704; Wedd. Chlor.
And. 2, p. 159.

Var. γ . longifolia: foliis gla-
bris integerrimis lanceolatis
cum scapa et spica prolon-
gis.

Hab. etc. Glabrate states of
P. Mirtella were collected at the mouth
of Rio Negro, North Patagonia,
at Valparaiso, and at Obrajillo,
Peru. The perennial root, as well

as the texture, etc., of the leaves
ought to distinguish it well from
any form of P. Virginica. All
the specimens have the connivent-
closed corolla and probably short stamens
with small anthers of the analo-
gous form of P. Virginica, except
the specimens from Obrajillo: these
have the corolla open, and the long
stamens and style both exserted,
and the ovary, in one of the two spe-
cimens at least, is fruitful, as it
occasionally is in the same form
of P. Virginica.

The Var. Orbignyana was
collected in the Andes of Peru,
above Baños. It is evidently no
more than a dwarf alpine form
of P. hirtella, which inhabits the
region ~~but lower down~~ just
below. The specimens all have
short stamens and connivent-

closed corolla; nevertheless it must not be hastily inferred that these flowers are self-fertilized, and are in no functional relation to their ~~long-st~~ counterpart with open corolla and exsert anthers. For, indeed, in these specimens the stigmatic summit of the style protrudes from the apex of closed corolla during anthesis; so that the dimorphism is intended for cross-fertilization, as in Primula and Horstonia; - only there seems small likelihood that pollen from the included stamens will ~~often~~ often fertilize the pistil of the long-stamined form. I have not been able to detect any such exserted styles in the allied P. Virginica, where however it may be expected to occur, In P. pusilla and P. heterophylla, Nutt., cross-ferti-

liration is facilitated by the corolla of the short-stamened and rather long-styled plants flowers being open at anthesis.

The var.?, longifolia is a dubious plant, collected at the mouth of the Rio Negro, North Patagonia, ~~only~~ a single specimen only.

4. Plantago princeps, Cham. & Schlecht.

Plantago princeps, Cham. & Schlecht.
in Linnaea, 1. p. 167; Walp. Rel.
Meyen. p. 402; DeCaisne in Ab.
Proc. 13, p. 704.

P. Queleniana, Gand. ex Cham. &
Schlecht. l. c., & Bot. Voy. Freyc. p.
445, t. 50; Hook. & Arn. Bot. Beech.
Voy. p. 93; Barneby, l. c. p. 47;
DeCaisne, l. c. p. 700.

Var. β . *laxifolia*: caule } pedali;
foliis magnis (4-7 pollicaribus)
submembranaceis oblongo-lanceo-
latis ovalibus seu obovatis basi in
petiolum alatum angustatis 9-
7-nerviis, basi laxius imbri-
catis; capsula plerumque 5-sperma.

Var. γ . *hirtella*: foliis praesertim sub-
tus cum pedunculis pilis crispatis
hirtis, ^{petiolis angustis} } capsula disperma: cct.
fr. praecedentis.

Hab. Sandrich Islands: the typical
form on the Kaala Mountains, Oahu,
and a form intermediate between this
and Var. β . on the mountain of West
Maui. Var. β . *laxifolia*, Hawaii, at
the northern base of Mouna Kea, grow-
ing among stones by the sea-side. Var.
 γ . *hirtella*, on the tabular summit of
Kauai.

Chamisso recorded his opinion that Gandichand's P. Deeluniana would probably prove to be a ~~more~~ form merely of P. princeps, and Burnett rightly combined them, but wrongly adopted the former name. No grounds for specific distinction appear among the specimens of the Oahu plant, whatever may be thought as to the more marked forms which are here appended as varieties.

The typical form of P. princeps has lanceolate nervose leaves, about 6 inches long, crowded in a coma, like that of a young Dracena, upon the summit of a naked, annulate-scarred, simple or branched, lignous caudex, from two to ten feet high. This passes variously into broader-leaved states, like that figured by

Gaudichaud, only generally more
petiolate, and these, ~~into~~ it seems
into the variety laxifolia. The
ovules are two in each cell, or
else two in one cell and only
one in the other. Style and fila-
ments both usually much elongated.

The var. laxifolia, except for
transitional states, would inevit-
ably be taken for a distinct
species. From the station it
might be thought to have descen-
ded the mountain and have been
altered by its warmer and mari-
time situation; but ^{*P. princeps*} ~~the species~~
is not known to occur on the moun-
tains of Hawaii. This form
blossoms and fruits while the stem
is less than a foot high and barely
lignous, but it becomes taller and
truly woody, although fistulous. The
leaves are less crowded, and mostly much
broader, from 4 to 7 inches long and

$1\frac{1}{2}$ to $2\frac{1}{2}$ broad, varying from oblong-lanceolate to oval or obovate, and narrowed at the base into a winged petiole of an inch or two in length. They are thinner and softer in texture, and their ribs or nerves (3 or 4 on each side) more separated, the larger ones rising from the midrib a good way up, and curving according to the breadth of the blade. The long spikes persist in fruit for some time after the subtending leaves fall off, and become pendulous. Seeds commonly 5!

The var. *γ*, *Mirtella* ^{(would} ~~may~~ ^{smaller and} fairly be regarded as a minute state of the preceding variety, but I found the ovules and seeds to be solitary in each cell.

All three may indeed prove to be distinct species; but they may with more probability be regarded as forms of one fruticose species, which varies.

in an extraordinary manner, as plants of the Sandwich Islands are prone to do. The blossoms are hermaphrodite, but some appear to be more fertile than others. The style is prolonged in all the forms; and the filaments also are ^{persisted} ~~existed~~. The lobes of the corolla which ^{remain} ~~are~~ reflexed after flowering are truly acute or pointed.

P. Brongniartii, Barneoud, Plantag. p. 35, described from a single specimen of Sandichand's collection, which Decaisne has not identified, from the narrow and very acute lobes of the corolla and the acute bracts would seem to be a ^{degenerate} state of the present rather than of the following species. Still, from its being placed near P. macrocarpa and P. virescens (which is P. eriopoda, Torr.), and the leaves described as fleshy

(one of the depauperate
and obtuse, it may be of forms of
the latter, erroneously characterized.

5. Plantago pachyphylla, Sp. Nov.
(Tab.)

P. acaulis; candice crassissimo
lanato; foliis crasso-coriaceis
ovali-oblongis ligulato-lanceo-
latisve integerrimis 5-11-nerviis
glabris vel tomentulosis puberis-
ve scapo multo brevioribus;
spica elongata densiflora; flori-
bis basi lanatis (nunc denum
glabratis); bractea sepalisque ovatis
obtusis vel obtusissimis; corollae
lobis ovatis obtusis obtusissimis
vel post anthesin acutatis; ovulis
in loculo 2-4.

Var. a. Maviensis: latifolia; foliis
9-11-nerviis (cum petiolo brevi
lata 5-7 poll. longis ^(pedalibus) 1½-2 poll.
latis) subtus scapisque lana
decidua tomentosis; caudice
erecto percrasso, ~~ovulis in locis~~
subsexus masculinis, stamini-
bus (stylisque) longe exsertis,
ovulis (in to quoque loculo
2-4) paucis gravidis.

Var. β. Havaiensis: caudice repente
minus lanato; foliis ovato-lan-
ceolatis latiuscule lanceolatis
seu lineari-ligulatis raro den-
ticulatis 5-9-nerviis in petiolum
breviusculum vel brevissimum
attenuatis cum scapo 1-2-pe-
dali glabris vel hirsutiusculis,
tomento saepius evanido; bracteis
sepalis plerumque ciliolatis
capsula ^{ellipsoidea} oblonga 4-6-sperma

paullo brevioribus. ~~Subsexus fo-~~
~~minus~~ — Subvar. gracilis, ~~foliis~~
longipes; petiolo gracili 1-2½-
• pollicari ^{lamina} ~~lanceolato~~ lanceolato-ob-
^(3-5-nervi) longa aquali; scapo gracili;
spica laxiflora; capsula oblonga
calycem subduplo superante.

Var. γ. Kavaensis; depauperata;
foliis oblongis cum petiolo lato
brevissimo sesqui-bipollicari-
bus; spica laxiflora cum sca-
po gracillimo semipedali;
cat. var. β.

Hab. Sandrich Islands. var.
α. Maui, on Mouna Halea-
kala to the elevation of 7500 feet.
"Apparently the same species on the
tabular summit of Kauai", ac-
cording to Dr. Ricker. Var. β. Haw-
aii, on Mouna Kea and Mouna

Roa to the elevation of 6000 to 8000
feet and in the environs of the
Great Crater. The subvar. gracilis,
● Hawaii, Kuny, no. 429. Var. V.
On the tabular summit of Kanai.

Of the ^{striking} plant taken as the type
of this species, only a single specimen
was gathered, in flower. It will be
seen to resemble closely, Dr. Hooker's
P. Aucklandia, from the Aucklandia,
from the Auckland Islands, while P.
principis resembles P. Fernandezia, of
Juan Fernandez. We do not possess
specimens of either of these southern spe-
cies. The present plant differs from
P. Aucklandia in the pubescence and
in having at least more than one
ovule and seed in each cell. It is
acaulous; the ^{short and} very thick caudex
apparently not rising above the
ground, sending off rootlets from its
whole length, clothed with the vestiges of
former leaves and with a dense coating

of long and rusty wool. Leaves in a close radical cluster, 5 to 7 inches long, about 2 inches broad, oval-oblong or elliptical with a short narrowed or petiole-like base, entire, very thick and coriaceous, ribbed with from 9 to 11 parallel nerves, which are impressed above and rather prominent beneath, glabrous or soon glabrate above, tomentose and also ^{with} ~~some~~ ~~short~~ ^{minute} pubescence underneath, the wool somewhat deciduous with age. Scape a foot or more in length, compressed towards the base, clothed as is the whole rhachis, with a ~~dense~~ copious floccose wool. Flowers crowded in a ~~spike~~ dense spike of 5 to 10 inches in length, sessile, glabrous, ~~except~~ ~~at~~ but surrounded at the base by a tuft of long woolly hairs. Bract ovate, obtuse, glabrous ^{except when young,} or nearly so, about equalling the calyx. Sepals ovate, obtuse, ~~thickish~~, with thickish scarious margins and a green keel, naked, or ~~lance~~ ciliate at the tip with

fine woolly hairs, which are deciduous,
Corolla, ^{with its tube slightly} ~~a little~~ larger than the calyx;
the lobes ovate and obtuse or obtu-
sish, spreading after anthesis. Fila-
ments and style ~~very~~ ^{much} elongated. Ovules
2, and I believe sometimes 4, in each
cell. Fruit unknown. The flowers
in the specimen not disposed to fertilize.

The var. Hawaiiensis occurs under
several forms, and conspicuously differs
from the plant of Maui in the leaves,
which are narrower, ~~varying from~~
oblong-^{or ligulate} or elliptical-lanceolate, ~~to~~
or broadly lanceolate, from 4 to 6 inches
long, and from 6 to 12 or even 15 lines
wide; the nerves usually fewer. The
candax is smaller and ~~smaller~~ apparently
~~erect~~ ^{erect}. The tomentum of the leaves
and scape slight or early deciduous,
or replaced with more persistent pubescence.
Spike ~~in~~ fruit less dense, a foot ^{long} or
in length. Sepals broadly ovate and

very obtuse, for the most part ciliate or ciliolate. Lobes of the corolla obtuse or even retuse, but sometimes apparently becoming acute after anthesis, ^{usually mostly 4 in each cell} Capsule maturing 3 to 5 small seeds, which are scarcely hollowed on their inner face. - No two species appear more distinct than do the var. γ from α , but Kuny's no. 429 unites the latter with var. β , and one Hawaiian specimen is quite intermediate between β and α . So that the whole series must be regarded as of one polymorphous species.

Plate Plantago platyphylla
 α , Mariensis, of the natural size,
Fig. 1. Flower and bract, 2, Corolla,
stamens and pistil, 3. The latter displayed, 4. Transverse section of the ovary,
5. Longitudinal section of the ovary.
The details variously magnified.

Ord.

Nyctaginaceae.

Pisonia grandis, Parkinson, R. Br.
(P. inermis, Forst., ^{*}non Jacq. P. procera,
Bertero, Deless. Ic. Sel. t. 87. P. Brunneriana,
Endl.), known from the rest by having
the fruit muricate with glands, the leaves
usually rounded at the base, and pieces of
the short limb of the perianth complete.
Coral Islands generally, Samoan Islands;

* Dr. Seemann, in his Journal of Botany,
1. p. 246, proposes to adopt Forster's specific name ~~fixed~~
~~by the latter on the ground~~ ~~because~~ (taken from Jacquin),
on the ground that Linnaeus had in manuscript notes
struck out every thing upon which he had founded his,
Pisonia mitis, and referred to it instead Jacquin's
P. inermis. Evidently that will not do at all.

There is nothing to take precedence of the American
P. inermis, Jacq.

also in other collections ~~from~~ (but not in
ours) from the ^{Sandwich} Society, and Feejee Islands.

Pisonia excelsa, Blume, (P. macrocarpa, Presl. Synb. t. 56. P. Fosteriana, Enol. in Rel. Meyer. t. 51. P. Sinclairii, Hook. & Ar. Bot. Beech. t. 50. (All these with good figures.) P. sylvestris, ^{P. mitis, Enol.} Teesm. } P. viscida, Seem. in Monpl. P. umbellifera, Seem. l. c. & in Jour. Bot. 1. p. 244. *) — remarkable for its long and narrow, smooth fruit ($1\frac{1}{4}$ to 2 inches long), more or less striate or costate, and commonly by the absence of ~~pl~~ or incompleteness of the plicae of the perianth. In our collection only from the Sandwich Islands, but a widely spread Oceanic and Australian species.

* Dr. Seemann (l. c.), having recently ascertained that this is the obscure Beodes umbellifera of Foster (founded on male flowers only), has proposed to restore Foster's specific name. But the rules of nomenclature do not in such cases demand the restoration of the older and obscure name, given under another genus, especially where inappropriate, as in the present instance.

Pisonia minor, Choisy? Brazil,
near Rio Janeiro; where other species were
noticed.

Boerhaavia ^{(erecta, Linn., and B.}
repens, Linn. St. Iago,
Cape de Verde Islands.

Boerhaavia paniculata, Rich. Brazil
near Rio Janeiro.

Boerhaavia discolor, HBK. and B.
viscosa, Lag., Chili.

Boerhaavia diffusa, Linn., the var.
obtusifolia on the Coral Islands generally;
the var. acutifolia on Wakes' Island,
Sandwich Islands, Samoa, and the Phil-
ippine Islands; both forms at the Society
Islands. Also New Holland.

Boerhaavia hirsuta, Willd. Birnie's
Island, one of the Coral Islands. An
American species, found also on the Gala-
pagos.

Colignonia scandens, Benth., or
near it, certainly the same as Matthews's
no 3122, ~~from~~ The floral leaves white, - from the
environs of Obrajillo, Peru.

Ord. Amaranaceae.

Amarantus melancholicus, Linn.,
var tricolor, Lam. was collected at the
Fiji Islands.

Amarantus retroflexus, Linn., at Val-
paraiso.

Amarantus paniculatus, Linn., var. stic-
tus, Moq., at Madeira.

Euxolus viridis, Moq., at Rio Jani-
ro, the Samoan and the Society Islands
(mostly the var. caudatus, E. caudatus, Moq.) ;
and a low, condensed form from Rio Negro,
North Patagonia.

Euxolus deflexus, Raf., at Valparaiso,
Chile.

Euxolus lineatus, Moq., at the
Sandwich Islands, viz. Hawaii, a

male plant, and Kauai, a female; for the Sandwichian plant appears to be dioecious, Macrae also gathered the female on Oahu. I have not the means of comparing with the Australian plant. It is to be noticed that Dr. Pickering ^{regards it as introduced} ~~speaks of the plant~~ into the Sandwich Islands.

Chamissoa altissima, H. B. K., at Rio Janeiro.

Charpentiera obovata and C. ovata, Gandich., at Oahu, Sandwich Islands. The two species appear ^{(on the whole,} to hold their characters. The latter was first collected by Menzies. Its nearly ripe fruit shows an evident disposition to be circumscissile, as in Chamissoa. On the other hand there is ~~no~~ anthers. ^{vide infra.} Achyranthes mutica, sp. nov., Sandwich Islands, Achyranthes aspera, Linn. (including A. argentea, Lam.), Cape de Verde, ^{Sagwan,} ~~Islands~~, Feejee, ~~and~~ Society, Mangsi, and Philippine Islands.

Achyranthes canescens, R. Br.
Freeze Islands; and a larger-leaved
form (A. velutina, Hook. & Arn. excl.
pl. Sandw.) from the Coral and the
Society Islands.

Achyranthes splendens, Mart. in DC.
(A. velutina, Hook. & Arn. pro parte),
Oahu and Maui, Sandwich Island,
on the coast. Besides the ^(fine) shining,
silky tomentum, this has stouter, and
denser sub sessile spikes, larger more
lanceolate flowers, and less cartilagi-
nous ^(and more) carinate scarious-margined
sepals than the preceding. (A. bi-
dentata, Blume, was also collected at the
Sandwich Islands, by Kunz.)
Nassau, Nyssanthus diffusa, R. Br. at Hunter's River, New South
Wales. Cyathula prostrata, Blume,
at the Freeze, ~~Samoan~~, and Philippine
Islands.

Aerva javanica, Juss., at St. Jago,
Cape de Verde Island.

Aerva lanata, Juss. at Manila,
Luzon.

Ptilotus (Nototrichium) Sandwicensis, nov. sp. Sandwich Island,
vide infra.

Trichium seligerni, A.
Burm., at Hunter's River. New
South Wales

Belosia argentea, Linn., picked
up near Manilla.

Belosia grandifolia, Moq., at
Rio Janeiro, Brazil.

Belosia longifolia, Mart., with
the preceding.

Iresine eriantha var. Poir. (Steban-
the virgata, Mart.), at Rio Janeiro,
in the Organ Mountains, near Rio
Janeiro.

~~Megisthaceae straminea, Mart., at
Rio Janeiro and M. ramosissima, from
Brazil, near Rio Janeiro.~~

Desiringia baccata, Moq. (D. celosi-
oides, K. Br.) at the Feejee Island and
Luzon; and D. Indica, Zollinger, at the latter.

Mogiphanes straminea, Mart.,
M. multicaulis, Mart. (referred to the
above by Grisebach), and M. ra-
• mosissima, Mart. (Species of Telan-
thera, Moq.), all from the vicinity
of Rio Janeiro.

Mogiphanes (Brandesia) pubiflora,
(Telanthera pubiflora, Moq.), under
several forms, in Peru, from Lima
• to Obrajillo.

Mogiphanes (Brandesia) elongata Bar.
nigricaps (Telanthera elongata, β . nigri-
caps, Moq.), at Obrajillo, Peru.

Mogiphanes (Brandesia) andicola,
(Telanthera andicola, Moq.), in the
high Andes of Peru, near Casa Blanca.

Mogiphanes (Brandesia? tomentosa?
(Telanthera tomentosa, Moq.?), but with
the heads mostly sessile or nearly so, at
Obrajillo, Peru.

Philoxenus portulacoides, A. St. Hil.
(Iresine portulacoides, Moq.), which bears
no wool at the base of any of the
sepals, on the coast of Brazil at
Rio Janeiro.

Philoxenus vermiculatus, R. Br. (incl.
Paggetatus, J. B. K.), with the preceding.
Alternanthera ficoidea, R. Br.
(Bucholzia maritima, Mart. Telanthera
maritima, Moq.), with the preceding; also
Tongatabu.

Alternanthera frutescens (Telanthera
frutescens, Moq.), at Callao, Peru.

Alternanthera paronychioides, ^{A.} St.
Hil., at Rio Janeiro, Brazil.

Alternanthera sessilis, R. Br. at
Hunter's River, New South Wales.

(including A. nodiflora & A. denticulata),

1. Achysanthes, Linn.

1. Achysanthes (Achysanthes) mutica, ^{Sw.} sp.

A. glabella; caule fruticoso ramosis si-
mo; foliis obovatis spatulatis seu
per lanceolatis obtusis viridibus in
petiolum ~~tenues~~ gracilem attenua-
tis; spicis ovatis semilibus ^{nunc paucifloris,} densifloris [^]
rhachi subvillosa; bracteis bracteolisque
late ovatis mucronatis ^{patente} flore 2-3-flor
bracteolibus; sepalis 5 ovato-lanceola-
tis obtusiusculis coriaceo-paleaceis tri-
nerviis; staminibus antheriferis 5;
staminodis oblongis apice laciniatis
filamenta adaequantibus.

Stat. Sandrich Island; Kaala
Mountains, Oahu; a narrow-leaved
form without flowers. The species is here

characterised from a flowering specimen
of Kunig's collection, from ^(the island of) Kanai.

This species, which seems to combine
Moquima's first two sections of Achyro-
this, is manifestly a ^{Pentamerous} congener of ~~the~~
Brown's A. arborescens of ~~the~~ Norfolk
Island. The bracts are mucous. Flowers
^{glabrous,} two lines long, in small heads or
spikes which are sessile in the upper axils
and terminal and scarcely surpassing
the petioles. Stamens remarkably
large, deeply lacinate at the truncate
apex. Style, &c. of the genus. Leaves
one to nearly two inches long, including
the petiole, almost glabrous, the nascent
ones, with the shoots, and especially the
nodes, pubescent.

Miss A

Still there just to

look May 1977

2. Ptilotus, R. Br.

Ptilotus, R. Br. Prodr. Fl. N. Holl. p. 415.

Psilotrichum (Blume) & Ptilotus, Moq. in
Dc. Prodr. 13. p. 279, 281.

1. Ptilotus (^{Psilotrichum}~~Psilotrichum~~) ^{Sp. Nov.} Sandwicensis,

P. fruticosus, tomentoso-sericeus; foliis
oppositis petiolaris ovatis ovalibusque
nunc obovatis subtus incanis; spicis
pedunculatis vel. ad apicem pedunculi
terminato-confertis ovatis v. cylindraceis
sepalis ^{ovatis} ~~lanceolatis~~ ^{obtusis} oblongis } dorso
cum bracteis rhachique villor-
simis, fructiferis conniventibus.

Var a. ramis floriferis etiam lignescen-
tibus; foliis ovatis nunc ovato-lanceolatis
plerisque acuminatis, rarius ovali-
oblongis obtusis basi pl. m. attenuatis.

Var. β . Kauaiensis: ramis: fere herba-
ceis; foliis obovatis oblongissimis basi
magis attenuatis sublus tomento
subaurato.

Hab. Sandwich Islands: Kauai
near the coast, where, as well as on Oahu,
it was also collected by Kuny. Var. β .
Coast of Kauai.

A shrub, "4 or 5 feet high," much branched.
Leaves all opposite, one or two inches long,
including the slender petiole, pinnately
veined, clothed with a fine silky tomentum,
greenish above, canescent beneath, some-
times with a yellowish tinge. Spikes very
numerous, terminal and from the upper
axils, on short or rather long and slender
peduncles, very villous-lanate, half
an inch or less in length. Bract ^{water, acuminate, almost} persistent,
shorter than the flower, ~~nearly~~ concealed
in the long hairs of the rachis. Bract-
lets deciduous with the flower, ^{water-} subulate.

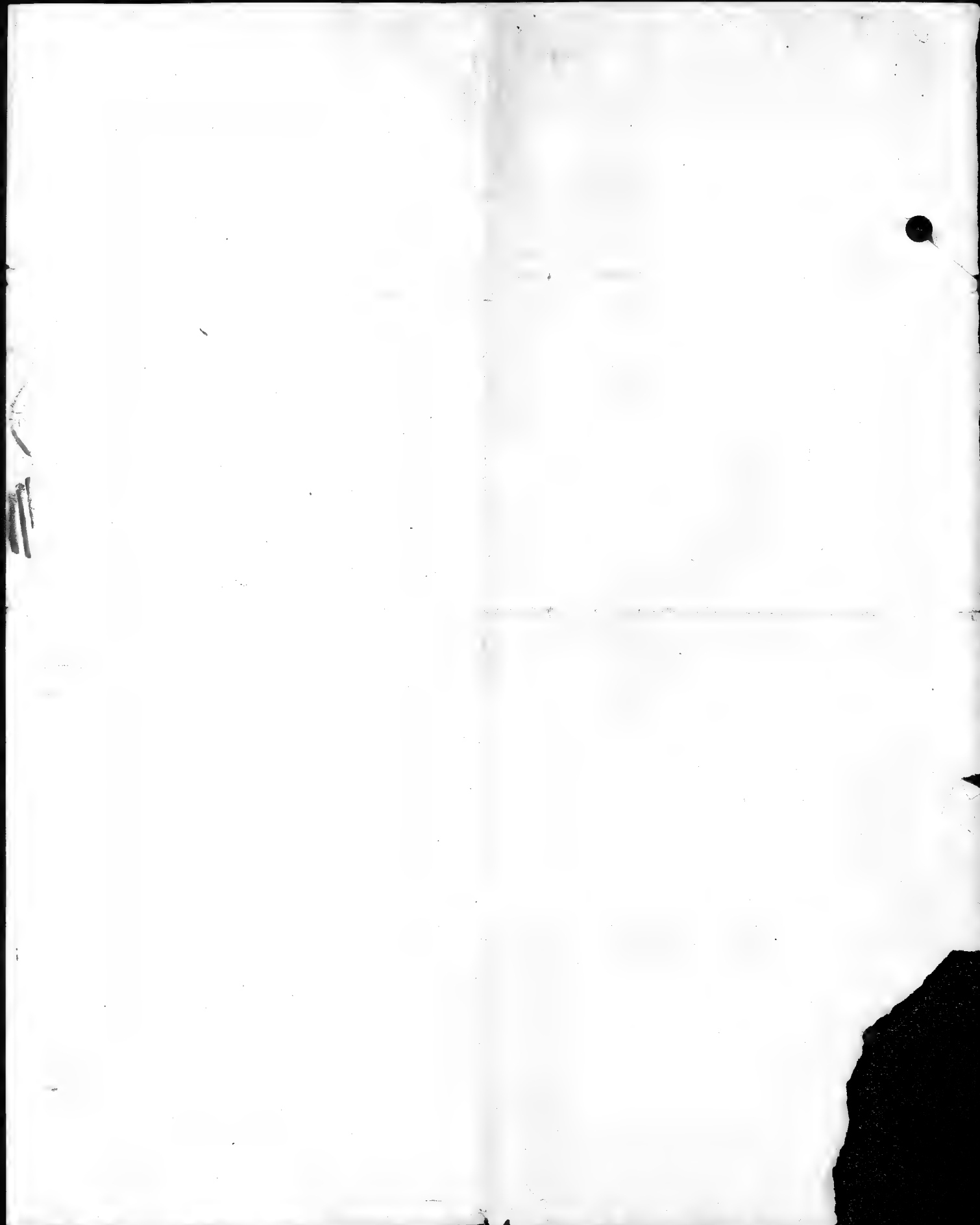
Sepals equal, of rather firm texture but with scarious margins, $1\frac{1}{2}$ to 2 lines long, ovate-oblong or ovate-lanceolate, obtuse or acutish, beset on the back (but not on the scarious margins) with long villous hairs, in fruit closed and more rigid. Stamens 5, included: filaments ^{monadelphous at the base.} subulate, anthers short-oblong, two-celled: no intermediate filaments or teeth. Utricle thin, rupturing at the base. Style elongated, filiform: stigma simple, capitate. Seed large. Embryo coiled in more than a circle: radicle ascending.

The specimens from Kauai (B. kavensis), besides their more herbaceous character, have rather larger and obovate, very obtuse leaves; but probably the difference is not specific.

In referring the Indian species which

he had formerly named Psilotrichum
ovatum to Ptilotus (on account of the
villous fringe to the inner sepals) Moquin-
Tandon neglected to mention that its
leaves are opposite. I may add that there
are obsolete teeth between the filaments.

The Sandwich Island-type, with
opposite leaves and woolly spikes, the
villosity on the back and not the ~~margins~~
margins of the sepals (Psilotrichum), Psi-
lotrichum, with opposite leaves and glabrous
or pubescent flowers, Pharnostachys, with
opposite leaves and the inner sepals vil-
lous-fringed, and the original Ptilotus,
N. Br. with alternate ^{narrow} leaves, and the in-
ner sepals villous-fringed, are all doubt-
less ~~so~~ sections of one genus rather
than separate genera.



Ord. Chenopodiaceae.

● Rhagodia baccata, Moq.,
the Chenopodium baccatum of
Labillardiere (R. Billardieri, R.
Br.), was collected at Moolangung,
New South Wales.

Rhagodia nutans, R. Br., at
Hunter's River, New South Wales.

Chenopodium lanceolatum,
R. Br., an incomplete specimen,
from Hunter's River New South
Wales, which almost exactly ac-
cords with C. Boissianum, Moq., or
C. leptophyllum, Nutt.,
the C. album var. leptophyllum,
Moq. in Ob. Prodr., of California, &c.
(= Fendler's no. 718.).

Chenopodium Sandwichiense,
Moq., on Oahu and Hawaii, both
on the plains by the coast and on
the mountains; also a form of it with less slender petioles on Maui;
the flowers tending

to polygamo-dioecious, the pistillate with elongated branches to the style and abortive stamens.

- (The C. album ^{Abies. 15 feet high. H. & A. 1861.} var. candicans, Moq., StriPLEX Oahuensis, Meyen, not collected.)

Chenopodium murale, Linn.,
picked up at Rio Janeiro, Brazil.

Chenopodium album, Linn.,
at Valparaiso, Chili.

Chenopodium glaucum, ^(Linn.) A., at
the Bay of Islands, New Zealand.

Chenopodium ambrosioides, Linn.,
in various forms, from Valparaiso
and Callao, Peru, also St. Helena.

Chenopodium Chilense, Schrad.,
from Valparaiso, Chili.

Knautia multifida, Moq., from Rio Negro, N. Patagonia.
Blitum (Orthosporum) glaucum,
glaucum, Moq., Hunter's River, New
South Wales.

Obione rotundifolia, Moq.,
collected, without flower or fruit, on

the Island of San Lorenzo, at
Callao, Peru.

● Obione Lampa, Moq. (Atriplex,
Willis), collected on the cliffs at
the Rio Negro, North Patagonia,
with almost pinnatifid leaves,
but destitute of flowers and fruit,
but with a pair of pinnatifid bracts.

Obione Montevideensis, Moq.³ (Atri-
plex, Spreng.) from the mouth of
the Rio Negro, a "procumbent,
hoary, small-leaved" species, mo-
naecious, with rounded lacinate
involucres.

Obione Patagonica, Moq.?, with
the above, "upright, hoary," dioecious,
with the bracts of the involucre
perfectly entire, ^{thick and coriaceous,} their back also
smooth and even in most of the
specimens, but occasionally bearing
^{more or less salient,}
one or two [^] tubercles or crests.

Obione undulata, Moq. Mixed
with the specimens of the above species

was a single loose fruit of this species, according to the character.

~~Threlkeldia diffusa, R. Br., from Hunter's River, New South Wales.~~

Salicornia Gaudichaudiana, Moq., from the coast at Rio Janeiro, Brazil, ^(apparently the same from) and Rio Negro, North Patagonia.

Salicornia Peruviana, HBK. from the ~~east~~ coast of Peru at Lima and Callao: specimens without ^{also} good fruit or flowers; probably S. ambigua, Michx., and even S. fruticosa, L. (Arthrocnemum, Moq.), and ^(perhaps) ~~the~~ ^{not} Salicornia Indica, Willd., ex Hook. f., from New Zealand and the coast of New South Wales; the embryo conduplicate and no albumen (in the New Zealand specimens); ^{men} therefore a good Salicornia.

Suaeda fruticosa, Hook., var. (S. laxifolia, Lowe) from Madeira; also a form with more slender, spreading

or recurved leaves (S. Stelmae,
Moq.) from St. Stelmae.

Suaeda foliosa, Moq. from
● Callao, Peru, and Lima, on the desert
upland Suaeda involucellata, nov. sp.,
from Rio Negro, North Patagonia; vide
infra.

Suaeda (Chenopodiina, Moq.) ma-
ritima, Dumort., from the mouth
of the Rio Negro, North Patagonia.

~~Suaeda australis~~

Suaeda (Chenopodiina) australis,
Moq. from Hunter's River, New
South Wales.

Salsola Kali, Linn., from the
coast of Chili at Valparaiso.

And the following may be here
appended: -

Mellocia Peruviana, Moq. in
Ob. Prodr. 13², p. 225, - as well as can
be judged from a fragment preserved
and from Dr. Pickering's note, - from

the environs of Obajillo, Peru.

Batis maritima, Linn., from the coast of Peru at Callao: - fruit and female flowers only, - so that it is not known whether the male flowers accord with Dr. Torrey's B. californica.

Sesuvium Portulacastrum, Linn., was collected also at the Sandrich Islands, on Oahu: specimens misplaced.

Suaeda, Forsk.

1. Suaeda involucellata, Sp. Nov.

S. fruticosa, ^{erecta,} glabra; ramis rigidis crassis; foliis lato-linearibus muculentis obtusis; floribus in axillis 1-3 sessilibus, singulis involu-
lo ~~5-phy 5-phy~~ 5-squamoso caly-
cem dimidium subaequante sup-

fulvis; calyce fructifero globoso
subcarnoso; stigmatibus 4-6;
(pericarpio membranaceo;
semine verticali); turgido margine
● convexo laevi nitido.

Itab. Mouth of the Rio Negro,
North Patagonia.

A "shrub, with linear succu-
lent leaves, and axillary flowers";
H.; ^{nodosely squarrose where the leaves have fallen;} the branches stout, the thick-
ened leaves half an inch long,
or the upper ones on flowering
shoots, shorter considerably, from
a line to a line and a half wide,
not narrowed at the base. Flowers
closely ^{rather large;} semile, the closed fructiferous
calyx a line and a half in diameter;
its segments suborbicular, fleshy, with
scarious margins. Seed fully a line
long, very turgid and with perfectly
rounded margin. What Dr. Pickering

has noted as a "chaffy 5-leaved
calyx" is a circle of scarious ^{orate} bract-
lets, like those in other species of
● This genus, only much more con-
spicuous, and apparently always five
in number. ~~After~~ This involucre, ~~is~~
stellular-radiate after the fructiferous
calyx falls off at maturity, is then
1½ or 2 lines in diameter.

Ord. Phytolaccaceae

● Nivina humilis, Linn., the
var. puberula, was picked up
at Rio Janeiro Brazil.

Arisaema coriacea Don (which includes A. drastica, Moq. (Pircunia drastica, Bertero, Poepp. & Endl. Nv. Gen. & Spec. 1, t. 43, 44), on the slope of the Andes of Chili behind Valparaiso, in fruit.

Phytolacca octandra, Linn., was collected at Sydney, New South Wales, doubtless introduced from the New World, to which the species, figured by Dillenius, belongs. Linnaeus referred to it a very different plant of Kämpfer's (P. Kämpferi, Gray in Mem. Amer. Acad.), and in collections the following is sometimes confounded with it.

Phytolacca Bogotensis, H.B.K.,
from the Organ Mountains behind
Rio Janeiro; frequent on burned
tracts; and Oahu and Hawaii,
Sandwich Islands, in the moun-
tain forests. This is the plant named
P. Abyssinica, Hook. & Arn. Bot. Beech.
Voy. and P. brachystachys, Moq. in
D.C. With rather the aspect of P.
decandra, it has the 'asperous' or glan-
dulous-roughened rhachis ~~of~~ and pedi-
cel of P. octandra (notwithstanding the contra-
ry character of Moquin under both bra-
chystachys and Bogotensis); from which
the habit and the pedicels (from one to three
lines long) distinguish it. The Brazilian
(like Henderson's Venezuelan) specimen gen-
erally 6-8-gynous, the ~~Hawa~~ Sandwichi-
an plant 5-gynous; but the latter is
sometimes 6-7-gynous. The stamens vary
from 5 to 10 or 11. It would seem to be
indigenous to the Sandwich Islands (Remy
also gathered it on Molokai, no. 212),
but very likely, was introduced and diffused
by birds.

Ercilla spicata, Moq., probably
a new variety of E. volubilis, A.D. Juss.,
a fragment from around Valparaiso, Chili.

Gr.

Polygonacea,

● Chorizanthe virgata, Benth. var. tomentosa, Benth.; characterised upon our single specimen from ^{Andes of} Chili above Santiago; remarkably different from the type of the species in the nearly muticous involucre.

Chorizanthe paniculata, Benth. Chili, in the vicinity of Valparaiso.

Chorizanthe vaginata, Benth. (of which C. frankenoides, Remy, appears to be a glabrate state), Valparaiso.
Rumex littoralis, H.B.K. (probably only R. conglomeratus, Murr.) and R. crispus, Linn., at Callao, Peru & introduced.

Rumex Maderensis, Lowe, near R. frangitarsus, Linn., was collected at Madeira.

Rumex curcifolius, Campd., on the Rio Negro, North Patagonia.

Rumex flexuosus, Banks, Holland. (Thort.), var. atimifolius, the R. curcifolius.

folius, var.? alispicefolius, Hook. f.,
Fl. Antarc., Lord Auckland Islands,
(Manifestly not a form of R. curiefolius,
apparently R. bunninghamii, var Hook-
eri, Meisner, in Db.)

Rumex Brownii, Campd. (R.
fimbriatus, R. Br.) New Zealand, and
Hunter's River, New South Wales.
Rumex acetosella, Linn., Hunter's River, New
South Wales.
Rumex giganteus, Kit., either
decumbent or sarmentose-climbing, on
the mountains of Hawaii, ^{(and Maui,} Sandrich
Islands.

Rumex longifolius, Db., ? or some
allied species, the flowers and fruit not
developed, on the Kaala Mountains,
Oahu, Sandrich Islands.

Polygonum stypticum, Cham. &
Schlecht., a form with shorter leaves, on
the coast at Rio Negro, North Patagonia.

Polygonum chilense, C. Koch, - probably
a mere form of P. maritimum, at Valpa-

raiso, Chili,

Polygonum acre, St. B. K., Brazil,
near Rio Janeiro.

● Polygonum hydropperioides, Michx.,
Peru, near Lima.

Polygonum persicarioides, HBK., With
the preceding, and ~~on the coast~~ Valparai-
so, Chili,

Polygonum imberbe, Forst., Banks Island in
min. Rep. Tart., Society Islands.

Polygonum glabrum, Willd., Sandwich
Islands, thought by Dr. Pickering to be
an introduced plant.

Polygonum minus, Stud. ex Hook. f.,
Bay of Islands, New Zealand.

Polygonum pedunculare, Wall. (P.
imberbe, Seem. in Transl. g, p. 258, non P.
Banks Island), Feeje Islands, and, var.
subcrispatum, Luxon.

Polygonum strigosum, R. Br., Stun-
ter's River, New South Wales

Muhlenbeckia gracillima, Meisner,
Sydney, New South Wales.

Muhlenbeckia australis, Meisner, New
Zealand.

Muhlenbeckia complexa, Meisner,
with the preceding.

Muhlenbeckia chilensis, Meisner, var. in-
juvenda (Polygonum injucundum, Lindl.),
Valparaiso, Chili; and a sterile fragment,
probably of the same species, from Obra-
jillo, Peru.

Coccoloba brasiliensis, Nees & Mart.,
and C. declinata, Mart., both well des-
cribed in the Flora Brasiliensis, from the
vicinity of Rio Janeiro.

Ord. Thymelaeaceae.

● Pimelea virgata, Vahl, P. prostrata, Vahl, and P. Unvilleana, A. Richard, were collected, all in a sterile state, at the Bay of Islands, New Zealand.

● Pimelea linifolia, Smith, and var. abietina, Meism., at Sydney, New South Wales.

Pimelea glauca, R. Br., with the preceding species.

Pimelea ligustrina, Labill., sterile shoots only, with the preceding.

Pimelea curiflora, R. Br., several forms, ~~with the preceding~~ one of them (also collected at Wide Bay by Bidwill) with larger leaves and shaggy hairs, var. hirsuta: Sydney and Hunter's River.

Pimelea spicata, R. Br., Moolung and Hunter's River, New South Wales.

Drapetes muscoides, Lam., at Orange Harbor, Tregia.

Nikstroemia rotundifolia, Decaisne, at Tongatabu: vide infra.

Nikströmia foetida (Daphne foetida,
Linn. f., Forst. S. Indica, Linn.), and
varieties, &c. at Society, Samoa, Feeje,
and Sandwich Islands: vide infra.

Nikströmia elongata, sp. nov., at
the Sandwich Islands: vide infra.

Nikströmia Sandwicensis, Meisn., at the
Sandwich Islands: vide infra.

Nikströmia Uva-ursi, sp. nov., at
the Sandwich Islands: vide infra.

Nikströmia luxifolia, sp. nov. at the Sandwich Islands: vide infra.
Nikströmia phillyreaefolia, sp. nov.,
at the Sandwich Islands: vide infra.

Passerina ^{filiformis, &c.} ericoides, Linn., at Cape
Town, Cape of Good Hope; sterile branches.

Struthiola erecta, Linn., and S. stri-
ata, Lam., with the preceding.

Gnidia oppositifolia, Linn., G. jun-
iperifolia, Lam., G. styphelioides, Meisn.,
and G. pubescens, Berg.; with the preceding.

Arthrosolea laxus, C. A. Meyer, at
the Cape of Good Hope.

~~ments and more or less included
style. Both forms occur in~~

● Leucosmia Burnettiana, Benth., at
the Tonga, Samoa, and Feeje Islands: vide
infra.

Leucosmia Horsteri (Dais disperma,
Forst.), at the same Islands: vide infra.

Leucosmia pubiflora, sp. nov., at
the Feeje Islands: vide infra.

Drymispermum lanceolatum, sp.
nov., at the Feeje Islands: vide infra.

1. Wikstrœmia, Endl.

1. Wikstrœmia rotundifolia, Decaisne

W. foliis herbaceis brevissime petiolatis
late ovalibus utrinque obtusissimis
vel rotundatis fere glabris, venis pri-
maris adscendentibus tenuibus
rete venularum vix fortioribus; ram-
ulis cano-pubescentibus; capitulis
paucifloris brevissime pedunculatis;
floribus subsessilibus ~~patentibus~~ pilosi-
usculis; calycis lobis ovatis obtusis,

Daphne rotundifolia, ~~Forst.~~ Linn. f.
Suppl. p. 223; Forst. Prodr. p. 28.

Wikstrœmia rotundifolia, Decaisne
in Jacquem. Voy. Bot. p. 146; Meism.
in Db. Prodr. 14, p. 544.

Hab. Fongatabu. Incomplete
specimens.

The hypogynous scales (in this 4 ~~and~~
which are connate in pairs) and the ovary,
whether hairy or not at the apex, do not seem
to furnish good or available ^{specific} characters. The
species are difficult.

● Mikstroemia foetida, Linna. f., Forst.

M. foliis herbaceis ovato-oblongis oblon-
gisve saepe acutis vel acutiusculis
glabris, venis primariis patentibus rete
copioso tenui venularum) vix validiori-
bus; fasciculis capitulisve) ^{subumbellulis vel} brevi-pedun-
culatis) ^{(rhachi glabrata brevi;} alabastris ramulisque novellis
sericeo-pubescentibus; ^{calycis} ~~perigonis~~ lobis ova-
tis oblongisve obtusis; drupis ovoides.

Daphne foetida Linna. f. Suppl. p.
223; Forst. Prodr. p. 28.

D. Indica, Linna. Spec.? Hook. & Arn.
Bot. Beech. p. 68. t. 15; sed s.p. hanc
Indica.

D. Indica var. foetida (R. Br.), Guillen.
Reph. Jart. p. 36.

Capsura purpurata, Linna. Mant. p. 225,
4 R. Br. Prodr.

Wikstroemia Forsteri, Decaisne in
Lacour. Voy. Bot. p. 146.

W. Indica, C. S. Meyer in Bull. &
Acad. Petrop., Meisner in Ob. Prot.
14, p. 543.

Var. *a. Tailensis*: foliis ~~sat firmis~~ cori-
aceo-membraceis apice vel utrinque
acutis; rhachii capitulorum primum
^{raro exescente} pubescente ~~non~~ ^{vix} ~~exes~~ ^{hand} ~~elargan-~~
~~da~~; floribus brevissimis pedicellatis confertis.

Var. *β. Samoensis*: foliis tenuioribus mem-
braceis plerumque acutis vel acu-
minatis; floribus magis pedicellatis
~~laxioribus~~ in capitulo laxiore, rhachii
^{deflorata} squarrosa demum exescente gla-
bra.

Var. *γ. Niliensis*: foliis membranaceis
^{ovalibus} nunc firmioribus utrinque obtusis
vel obtusissimis; floribus paucis
glabellis.

Var. ? *Oahuensis*: foliis subcoriaceis —
oblongis acutis vel acutiusculis —
subtus glauco-pallidis; floribus per-
pancis.

Hab. a. Tahiti, to Society Islands, —
B. Samoan or Navigators' Islands. —
V. Feejee Islands: also collected by
Dr. Seemann. S. Oahu (Kunz, no. 214)
and Maui, ^(also Kamei?) Sandwich Islands.

The materials at hand are scanty
in flowers and fruit. They cover perhaps
more than one species, and those of the
Sandwich Islands are quite doubtful.
But ~~perhaps~~ ^{and variable} probably all belong to a wide spread
Oceanic species. I have not seen
it from China, and, as it is not ^{known} ~~known~~
from any part of India*. I have pre-
ferred Forster's specific name, first
published by the younger Linnaeus.

* The *Mikstroemia Indica* from Chit-
tagong, distributed by Drs. Hooker and Thomson,
which I have without flowers or fruit, may
be a narrower-leaved form of the follow-
ing, apparently new species:—

Mikstroemia retusa (sp. nov.): foliis
crassiusculis ~~opacis~~ ^{submembranaceis} cuneato-obovatis
apice rotundatis saepius retusis ~~opacis~~
~~subtus pallidis~~ fere glabris, subtus pal-
lidis venis primariis adscendentibus
rectiusculis prominulis venulis minime
reticulatis, supra venis venulisque
fere obsoletis; fasciculis florum sub-
sessilibus; floribus ramulisque pu-
bentibus; calycis lobis ovatis obtusis-
simis tubo ~~trifido~~ multum brev-
ioribus; drupa subglobosa. — Loo-
Choo Islands, Charles Wright in
North Pacific Exploring Expedition. —
Leaves about an inch and a half long.
Flowers 5 lines long.

3. Mikstrœmia elongata, sp. nov.

• M. foliis membranaceis oblongo-lanceolatis seu ovato-oblongis acuminatis acutisve ^{glabris} subtus pl. m. glauco-pallidis (2½-4-follicaricaris), Venis primariis patentibus quam venulae laxa reticulatae magis prominulis; ramulis glabris seu glabellis; capitulis paucifloris brevissime pedunculatis, rhachi ^{deflorata} ~~mix~~ glabro haud exescente; drupa oblonga vel fusiformi.

Hab. Sandwich Islands; on the mountains of Kauai, Maui, and Oahu.

The flowers are unknown, the specimens from the three islands being in fruit. The leaves are large and long, 2½ to 4 inches by one or

one and a half in width, thin, and
in venation resembling *M. foetida*, but
the veinlets less reticulated and less con-
spicuous. Inflorescence in fruit sub-
sessile or short-pedunculate. Drupe 5
to 6 lines long, in the dried specimens
^{mostly} appearing as if pointed at both ends.

(in *Db. l. c.*)
4. Mikstraemia Sandwicensis, Meisn.

M. foliis subcoriaceis ^{vel} *herbaceis* ~~ovato-~~
~~oblongis~~ *ovatisve* *basi rotunda-*
tis apice ^{sapientius} *acuminatis* *ramulisque*
glabris, *venis primariis pater-*
tibus subtus prominulis, *venulis*
obscuris; *capitulis multifloris sub-*
sessilibus breviter pedunculatisve
denuo spiciformibus; *rhachi*
elonganda, *reflexa* ^(unciali) *squarrosa* *seri-*
ces-pubescenti; *calycis sericei*
lobis ovalibus obtusis; *intra ovoidea.*

Sandwich Islands, Hawaii, near
the coast, at Byron's or Stilo Bay.

Our scanty specimens, collected
in the same District as Macrae's,
have been compared with his. If
the downy ^(at length) and elongated rachis of
the inflorescence should prove inconstant,
then the doubtful var. *S.* of *M. foet-*
ida, ^{along with} ~~may probably be joined with this.~~
^{dubious} several fruiting specimens, from Kauai
and Oahu, - having nearly coriaceous
leaves with primary veins ^{beneath} rather prominent
and the veinlets less distinct, - may
probably be joined with this, ^{or perhaps} ~~some of them~~ ^{Better} with *M. phillipsii*. Better
and more abundant materials of ~~these~~
must be had, before the Sandwichian
Mikstroemia can be satisfacto-
rily settled.

5. Nikstroemia Alva-ursi, sp. nov.

N. procumbens; ramulis brevissime
 ● tomentosis foliosisissimis; foliis crasso-
coriaceis obovatis obtusissimis retu-
sive ^(raro apiculatis) (subpollicaribus) brevi-petiolatis
opacis ^{glabris,} venis venulisque obscuris;
capitulis subserilibus multifloris
in spicam elongatis, rhachi (de-
num semipollicari) deflorata tomen-
tosa confertissime areolata; calycis
lobis ^{lato-} ovatis obtusis ^{tubo triplo brevioribus;} drupa globosa.

Hab. Oahu, Sandrich Island,
 near Honolulu; ^{on dry ridges,} Kolva, Kanai (also)
~~Also Kanai~~ (Remy,
 no. 225.)

Branches stout, nearly prostrate,
 crowded with leaves; the inflorescence ter-
 minal and on very short lateral branch-
 lets. Leaves from half an inch to an
 inch in length, including the petiole
 of hardly a line and a half in length, rounded

and obtuse at the summit, acute at the base, dull, very thick; the midrib rather prominent beneath, but the ascending primary veins obscure on both surfaces; the veinlets nearly obsolete. Flowers almost sessile, 3 lines long, more or less pubescent. Rhachis not square, but covered with sunken areolae separated by short tomentum. Stypogynous scales 2, two-cleft.

b. Wikstroemia luxifolia, sp. nov.

W. humilis, ramosissima; ramulis novellis tomentoso-sericeis; foliis coriaceis ovalibus obovatis que basi acutis breve-petiolatis apice plerumque rotundatis (pollicaribus ^{vel minoribus}) opacis glabris, venis primariis obscuris, venulis absolutis, costa subtus prominula; fasciculis plurifloris subsessilibus, rhachis

Deflorata vix elongata tomentoso-pu-
lescente areolata; calycis lobis ovato-
lanceolatis oblongisve ~~tubo sub-~~

- ~~Dimidio brevioribus~~ vel 2 interiori-
bus dimidium tubi adaequantibus
vel saepius 2 interioribus brevioribus;
Drupe subglobosa.

Hab. Sandrich Island; Hawaii
on the coast west of the Great Crater
Mountains of Kauai?

Intermediate in appearance between
the preceding and the broad-leaved form
of the following. The leaves, of a rather
firm coriaceous texture have a ferru-
gineous hue underneath. Flowers $4\frac{1}{2}$
lines long, almost glabrous, with larger
and narrower lobes than in any of the
foregoing, at least the outer pair, which
appear considerably to exceed the inner in
most of the few flowers we have ~~to examine~~
for examination.

7. Mikstrœmia phillyreaefolia. ^{Sw.} sp. ~~R.~~

● M. humilis, ramosissima, undique
glabra; foliis coriaceis ovalibus ob-
longis seu oblongo-lanceolatis acutis
obtusisve basi in petiolum brevem
attenuatis, costa subtus prominente,
venis vix prominulis seu obsoletis;
fasciculis paucifloris subsimilibus,
rhachi glabra, deflexa squarrosa
paucis excrescente; calycis lobis ovato-
~~seu oblongo-lanceolatis~~ - lanceolatis
seu angusto-oblongis tubo dimidio
brevioribus; drupa globosa caerulea.

Var. a. foliis viridibus latiori majori-
bus (1-2-pollicaribus) parum rigidis,
venis subtus saepius ^{manifestis} evidentibus, venu-
lis obscuris.

Var. β. rigida: foliis ^{confertissimis} pallidioribus
opacis rigide coriaceis parvulis
parvisque (semi-sub-pollicari), venis
venulisque obsoletis.

Hab. Hawaii, Sandwich Islands,
near the ~~great~~ Great Crater and on
Mouna Loa ^(Var. β.) to the elevation of
6700 feet. Also in Keneke's collection,
no. 222, the var. β.

apparently
A low, upright shrub, with ~~very~~ rigid
coriaceous leaves, less so in var. α , -
with flowers 3 to 4 or 5 lines long, the
lobes of the ^{crested glabrous} calyx narrow, ~~and longer~~
~~at length linear - oblong.~~
~~than in any foregoing species.~~ The
two forms would seem to be quite
distinct; but indications of their run-
ning together are not wanting. The
var. β , doubtless inhabits more arid
(and exposed
stations.

2. Leucosmia, Benth.

● Char. Drymispermi, nisi calycis squama faucis inserta, lobis alternis. — Filos 5-4-meri 8-10-andri, genitalibus (more quarundam Rubiacearum etc.) dimorphis.

The specimens in hand, except of L. Bourrettiana, Benth. (Sais Drymisperma, Fout.), are far from complete or good; and I cannot very well match them with Dr. Pickering's notes, which materially aid in the elucidation of the species. The flowers being sometimes tetramerous and octandrous, there is nothing to separate the genus from Drymisperma except the scales in the throat of the perianth, and these are minute in two of the species. The anthers do not prove to be versatile, as they

were said to be by Bentham, nor indeed are they so represented on his plate. So that, instead of placing the two genera under distinct tribes, as done by Meisner, after the model of those of the Thymelaeae proper, the question rather is whether Leucosmia should not be reduced to a mere section of Drymispermum. As there are at least three species of the former now known, it will be most proper to keep up Bentham's genus, at least for the present.

In all the species of which sufficient materials are extant, I find that the genitalia are dimorphous, some flowers having short filaments or nearly sessile anthers and an exserted style, others (which only have been described hitherto), slender filaments, the upper set therefore exserted, and an included style.

The stigmas correspondingly differ, that
of the included style being usually clavate
or almost linear, that of the exerted
● style thicker or capitate. This
dimorphism probably occurs in Dry-
mispermum also; ~~but I have not the~~
~~means materials to investigate it.~~ where
the specific characters drawn from the
length of the filaments and of the style
are ~~very suspicious~~ open to much sus=
picion. The only species which we
have from Tongatabu is Burmann's
L. Burmanniana, which, so far as I
know, is always 5-merous and 10-an=
drous. But ~~from~~ ⁱⁿ the Samoan and Fee=
jee Islands ~~we have~~ an allied species
was collected which has 4-merous act=
androus flowers and truly ovate-lanceo=
late acuminate leaves, such as Forster's
character assigns to his Dais Disperma.
I thought it likely, therefore, that
Forster's species, ~~was made~~ with "flori="

his octandris decandrisque", was
made up of these two, and I still
incline to suppose that the charac-
ter in the Prodr. had the ~~thin~~
~~ner~~, and ovate-lanceolate, slender-
pointed and thinner leaved octan-
drous species in view. But, on the
other hand, the fine drawing of Forster's
D. Disperma (tab. 136), made on the
spot at Tongatabu (of which, by the
kindness of Mr. Bennett, the obliging
curator of ~~Botany~~ the botanical
collections at the British Museum
I possess a copy) exactly ^{Benthian's} represents
L. Benthiana. The only difference
is that Benthian's plate represents the
form with slender filaments, and Forster's,
that with ^{sub} sessile included anthers.
The specimen in G. Forster's Herbarium,
acquired by the British Museum at
Lambert's sale, consists of a single
leaf of the same species. This leaf,

and the leaves in the drawing are by no means "enerviis"; that portion of Forster's character, therefore, remains still unaccountable.

Under these facts, Forster's Dais Dis-
sperma must be referred to Leucosmia
Burnettiana (which should have taken
the name of disperma), ~~and not~~ rather
than to my L. acuminata, to which
the specific phrase might better apply,
but which cannot be shown to have been
known to Forster at all.

1. Leucosmia Burnettiana, Benth.

L. foliis late ovalibus ovatis sum-
mis nunc orbiculatis subito acumi-
nulatis subcoriaceis crassiusculis;
capitulo terminali multifloro; floris
5-meris decandris ^{lobis ovatis} extus glabris;
squamis faucialibus parvis integris;
antheris linearibus oblongisque;
drupa globosa, putamine percrasso.

Leucosmia Burnettiana, Benth. in
Stork. Land. Jour. Bot. 2, p. 231, & Bot.
Voy. Suppl. p. 179, f. 57 (1843).

Dais disperma, Forst. Prodr. p. 33, ~~pro~~
~~parte 3~~ fide herb. & tab. ind. 136.
Dymispermum? Forsteri, Meisn. in Ob. Prodr.
14, p. 605 (1856).

Tab. Tonga, Samoan, and Feejee
Islands: "frequent along the sea-shore".

From the generic name it may
be inferred that the plant collected by
Mr. Kinds had white flowers; but
Dr. Pickering notes them at the Samoan

blends as "purple", and in his no 2 -
which I take to be a form of the species
with larger or longer, more oblong leaves
- as 'red-purple'. It is of the latter that
Dr. Pickering ^{specifies} ~~records~~ "the clusters of
flowers with large bracts". These have
disappeared from our, as from Benth-
an's specimens. ~~leaving~~ The anthers
are basifixed, are linear when on
slender filaments, but shorter or barely
oblong in the form with very short
filaments. The latter flowers have
the exserted style surmounted by a thick
clavate or oblong-capitate stigma,
while in the former the included
stigma is much longer and more
slender. Drupe by abortion ~~and~~ some-
times one-seeded. ~~Further~~ I have
nothing further to add to Mr. Benth-
an's account of this plant.

2. Leucosmia acuminata, Sp. Nov.

L. foliis ovato-lanceolatis seu ovato-oblongis sensim vel promissa acuminatis membranaceis; capitulis terminalibus axillaribusque plurifloris; floribus tetrameris octandris extus glabris, lobis oblongis; squamis faucialibus majusculis tenuibus subincisis erosisque; antheris oblongis.

Dais disperma, Horst. l.c. quoad char. pro parte ??

Hab. Samoan and Feejee Islands.

"A shrub or small tree," "with ornamental red fruit", ~~and~~ at the Samoan Islands; ~~and~~ "the flower-clusters with two cordate involueral bracts" (Feejee Island, if Dr. Pickering's notes are rightly matched. Leaves 4 to 6 inches long, $1\frac{1}{2}$ to $2\frac{1}{2}$ inches ^{(rounded at the base,} wide, a greening with the specific phrase of Forster except as to the character "enerviis." The slender primary veins, with the midrib, are rather conspicuous, and (being of thinner texture) the reticulated veinlets are more apparent than in the foregoing species in the dried specimens, especially by transmitted light. Petioles a fourth or a third of an inch long. Peduncles axillary as well as terminal, 3 to 6 lines long, bearing on their very apex 5 to 7 sessile flowers. These are of the same structure and form as in L. Burmanniana, except, so far as examined, they are tetramerous and

octandrous. Calyx $1\frac{1}{2}$ to 2 inches long, glabrous, or nearly so externally, the 4 oblong obtuse lobes tomentulose within and also without when ~~they~~ covered in aestivation: the color not recorded, probably purple or purplish. The dimorphism is as well marked as in the preceding species: the stigma of the long style capitate and emarginate, of the short style much less enlarged. There is no fruit in the collection.

Dr. Seemann's Drymispermum subcordatum, no. 381 of which I have flowers and his D. n. sp. 382, of the Feejee Islands, have ~~rather~~ broader, less tapering or acuminate, and thicker leaves than our L. ^{acuminata} ~~torsteri~~, and retuse or ~~subcordate~~ subcordate at the base, the petioles half an inch or more in length. They perhaps belong to a quite distinct species. But the scales in the throat of the perianth are as in L. ^{acuminata} ~~torsteri~~, i.e. are larger, broader, and thinner than in L. Burnettiana, and more or less erose or incised. With the materials in hand, it is not safe to refer Seemann's plants to our species.

3. Leucosmia pubiflora, sp. nov.

L. foliis ovato-lanceolatis oblongisve
sensim acutatis vel acuminatis
subcoriaceis; ^{pedunculis} ~~capitulis~~ axillaribus
et fasciculatis e ramos vetustiores
pridem defoliatos; capitulis pauci-
plurifloris; floribus pentameris de-
candris extus pubescentibus, lobis
oblongis; squamis faucealibus par-
vis integris; antheris parvis brevi-
oblongis (filamentis ~~is~~ strob. gracil-
limis); drupa immatura ovato-
fusiformi.

Drymispermum sp., no. 379, Seem.
l.c.

(no. 380)
Drymispermum montanum, Seem.,
l.c. ? (Specim. imperfecta.)

Hab. Feejee Islands.

"A tree, 30 feet high; flowers mostly on the trunk." Met peduncles occur abundantly in the axils of the leaves of the specimens. Leaves $2\frac{1}{2}$ to $4\frac{1}{2}$ inches long, and from one to two wide, on petioles of 2 or 3 lines in length, rounded or acutish at the base, more or less acute or acuminate, of a rather firm coriaceous-chartaceous texture; the primary veins and the reticulated veinlets less evident than in either of the foregoing species. Peduncles an inch or less in length, about 7-flowered. The tubular calyx is 2 inches long, and resembles that of L. Fosteri, but is pentamerous in all the few flowers collected, and is beset with somewhat woolly pubescence. All our flowers have stamens ^{with short-oblong} ~~very~~ slender anthers on very slender filaments (but the upper set shorter than ^{an} the lobes of the calyx), and ^{are} included

style. Immature Dufus (loose in the collection) are 9 lines long, smooth, and tapering to each end.

● That Seemann's no. 379 belongs to the present species (although I have no flowers) is evident from the foliage and from the peduncles borne on warty enlargements of old branches. His no. 380, with young buds only may be different.

3. Drymispermum, Reinw.

1. Drymispermum lanceolatum, Sp. Nov.

D. glaberrimum; foliis breviter petio-
latis lanceolatis utrinque subacutis
supra nitidulis, venis venulisque
tenuibus; fasciculis terminalibus pau-
cifloris; calyce infundibuliformi-
tubuloso extus glabro, lobis ovato-
acuminatis.


Hab. Feejee Island, in the moun-
tains behind Muthuata.

Leaves 2 or 3 inches long, including
the short petiole, 6 to 9 lines wide, green
both sides, the primary veins scarcely
more conspicuous than the fine, retic-
ulated veinlets. Peduncles ^(mostly) ~~very~~ short.

Involucral bracts ovate, caducous.
Flowers about 5, semile, "white and fragrant,"
a little more than an inch long, 4-merous,

octandrous; the ovate lobes of the calyx tapering into a slender acumination, tomentulose on the upper face, as also on the lower face of the two inner where they are enclosed in the bud. Stamens in two distinct ranks, just as in Leucosmia (and probably in Drymispermum generally), all on short filaments in the specimen collected; the (oblong) anthers of the upper set barely exerted out of the throat, the others deeply included. Style also deeply included; the stigma clavate-linear and glandular, resembling that of the short-styled form of Leucosmia Bur=
netti'ana. It may be inferred, therefore, that Drymispermum also has dimor= phous genitalia. The fruit, which is not met with in the collection, is said to be "half an inch in length, and somewhat compressed."

Ord. Elaeagnaceae

 Elaeagnus latifolia, Linn., the var. triflora (apparently also E. Perrottetii, Schlecht. in DC.) was collected in Luzon, near Manila, and

Abotoxicon punctatum, Ruiz & Pavon (which has been referred to this order until its true affinities are determined), in the vicinity of Valparaiso, Chili.

Ord. Penaeaceae

Penaea mucronata, Linn., one of the common South African species, was picked up near Cape Town.

Ord.

Monimiaceae.

● Siparuna erythrocarpa, A. DC. (Citri-
osma erythrocarpa, Tul.) Brazil, near
Rio Janeiro; in fruit.

Mollinedia gracilis, Tul. Brazil, near
Rio Janeiro; in fruit.

Hedycaria dentata, G. Forst. Bay of Islands,
New Zealand; in fruit.

Hedycaria dorstenioides, sp. nov. ~~common~~.
Tasmania and Sarawak Islands.

Boldea fragrans Gay (Knizia fragrans,
Baron.) Chili, near Valparaiso.

Doryphora cassapras, Endl. Cook's River,
New South Wales.

Mr. Gen.? Monim. - Atherospermearum. Tas-
mania Islands. The materials too incomplete.
A shrub or tree, glabrous, with alternate,
oval and quite entire, Laurel-like leaves
(3 or 4 inches long), their veinlets minutely
reticulated; very short and thick woody ~~peduncles~~
~~axillary~~ peduncles, either solitary or geminate
in the axils of the leaves, and enlarging under

a perianth of 4 or 5 short and broad imbricated sepals into a globular ^{uncculate} lignesc-
cent receptacle, which appears to bear,
covered by the ~~perianth~~ unexpanded perianth, sev-
eral plumose-hairy ovaries with scarcely
any styles: but these are too little devel-
oped to make out any structure. No
stamens or male flowers known. Perhaps
a Laurelia, which genus Dr. Storker
has recently reduced to Atherosperma.

Hedy carya, Forst.

1. Hedy carya distenivides, Sp. Nov. 34.

H. foliis fere membranaceis ovatis oblongis-
ve plerumque integerrimis longius pe-
tiolatis; racemis terminalibus 5-7-floris;
receptaculo cum perigonio peltato. Disci-
formi margine subintegerrimo, ^{dense} masculo
glabro supra antheris innumeris) vestito,
connectivi apice dilatato truncato quam
loculi angusti latiore; fructifero supra pu-
bescente; drupis haud stipitatis.

Var. β . denticulata: foliis membranaceis
variter dentatis vel denticulatis.

Stat. Sandal-wood Bay. Feejee Islands;
with ~~toothed~~ ^{toothed} also with oblong leaves,
all entire. Samoan Island; mostly with
larger and thinner, ovate-oblong leaves,
sometimes toothed (var. β).

Of this remarkable plant I detect no record in Dr. Pickering's notes. We have the male plant in flower, and the female in fruit, both from the Samoan and the Feejee Islands. It is, doubtless, a true Hedyocarya with the lobes of the calyx obsolete or reduced to seven or eight broad and slight crenatures in the male, and apparently also in the female flowers; the somewhat perfectly flat, Dristenia-like, circular and peltate disk of the latter from a third to half an inch in diameter, its upper surface completely ^{and thickly} covered with sessile anthers. These in structure accord with the other species of Hedyocarya (the cells linear ~~and~~ oblong and opening longitudinally, except that the connective is dilated at the apex (much as in Anonaceae) into a flat summit covering the narrower cells. The ovaries in the female plant appear to be no more numerous than those of H. dentata; several ^{may} mature upon the same receptacle; the drupe ovoid, two thirds or three fourths of an inch in length, obscurely if at all stipitate, with a thin

sarcocarp and a crustaceous endocarp;
the seed, albumen &c. as in *St. dentata*;
but in none of the fruits examined ~~was the~~
~~embryo~~ had the embryo been formed.

The herbage is glabrous, or the inflorescence
minutely puberulent. Pedicels an inch
or less in length. Leaves from 2 or 3 to 6 or
even 7 inches long, thin or ~~thinish~~ thin-
nish, loosely pinnately-veined and venulose,
acute or acuminate; petioles half an inch
to an inch in length. There is little rea-
son to suspect that the diverse forms of
foliage indicate more than one species.

Ord. Chloranthaceae,

Ascarina polystachya, Forst. Tahiti,
Society Islands.

Ascarina lanceolata, Hook. f., ex
Sonn. in Bomplandia, 9, p. 259. Orolau,
Hejee Island. (char. of med. etc.)

Chloranthus? foliage only (with
broadly obovate crenate and emarginate
leaves), from the mountains of Tahiti.

Chloranthus salicifolius, Presl, Epi-
melia, Luzon, in the Majajai Moun-
tains.

Chloranthus brachystachys, Blume,
Luzon, near Baños.

Hedyosmum Bomplandianum, HBK.
Brazil, near Rio Janeiro. (381. an
Siamensis)

Ord. Aristolochiaceae,

1. Aristolochia, Tonn.

1. Aristolochia Pickeringii, Sp. nov.

A. (Diplolobus) herbacea, volubilis,
glabra; foliis membranaceis wa-
to-cordatis, acumine abrupto
brevis; floribus quasi-racemosis
glaberrimis; perianthio recto
unilabiato, ^{tubo} super ovarium stip-
itatum attenuato deinde glob-
subgloboso-inflato denique brevi-
ter attenuato, labio lanceolato
acuto tubum totum excedente,

Hab. Tutuila, one of the Samo-
an or Navigators' Islands, on the
mountain ridge, at the elevation
of 800 feet.

This species is ~~also~~ related to *A. acuminata*, Lam., *A. Tagala*, Cham., and *A. Gardichandii*, Du-
● ● Chartre. From the first it dif-
fers in its broader and thinner
leaves, elongated axis of inflorescence,
and straight, glabrous perianth
with a longer and narrower, pointed
limb; from the second by the
broader leaves, the shape ^{and length} of the
limb of the perianth, and by the
narrowed portion of the tube above
the globular inflation being scarcely
larger than the latter, and much
shorter than the limb; from the
third by the whole shape ^{and proportions} of the peri-
anth, and of the leaves. Leaves 4 to 6
inches long. Flower about 2 inches long,
slender; the limb nearly an inch and a
half long, 3 or 4 lines wide. Only a
single and poor specimen was collected.

Nepenthes, ~~Leaf~~ Pitchers
of Nepenthes ampullaria, ~~Jack~~,
and N. Rafflesiana, Jack were
picked up at Singapore.

Ord. Lauraceae.

● Cinnamomum camphoratum, Blume,
Var. ? Vitiananum, Meissn. in Db. Foliage
only in the collection, of two forms or species
which nearly accord with C. camphoratum;
one with broad and lucid leaves, evidently
the plant recorded by Dr. Pickering as
having bark with the flavor of Cassia, but
stronger; the other narrow-leaved and
glaucescent. Feejee Islands

Cinnamomum, foliage ^{of a species} only allied to
C. brevifolium, Miguel., mentioned in Dr.
Pickering's notes as having aromatic
bark, Feejee Islands.

(C. pedatifidum, Meissn. in Db., Dr.
Serran's no. 376, does not occur in our
collection.)

Cinnamomum Zeylanicum, Breyer,
the officinal cinnamon, cult. at Singa-
pore.

Persea Indica, Spreng., Madeira;

Persea gratissima, Gertn., Avocado Pear,
Madeira; probably cultivated.

Persea Lingue, Nees, Chili, near
Santiago.

● Apollonias Barrariensis, Nees, Madeira,
Nesodaphne Tarairi, Hook. f. New Zealand,
at the Bay of Islands.

Nesodaphne Tarva, Hook. f. New Zealand,
at the Bay of Islands.

Cryptocarya Pennus, Nees, Near Val-
paraiso, Chili.

Endiandra Sieberi, Nees? New South Wales,
foliage only.

Ajonea saligna, Meissn. Brazil, near
Rio Janeiro.

Ajonea elliptica, Meissn. Brazil, with
the preceding, and too nearly related to it.

Aydenron intermedium, Meissn. Bra-
zil, near Rio Janeiro.

Mespilodaphne parviflora, Meissn. Brazil,
near Rio Janeiro.

Oreodaphne Langsdorffii, Meissn. Bra-
zil, near Rio Janeiro.

Oreodaphne foetens, Nees, Madeira.

Stychnodaphne lanceolata, Kees? Brazil,
near Rio Janeiro: in fruit.

● Camphoromœa divaricata, Kees, Brazil,
near Rio Janeiro.

Goëppertia hisuta, Kees., var. Brazil,
near Rio Janeiro. Idiage, also, of a
broad-leaved species.

Tetranthera calicaris, Hook. f. (1853). J.
Tangas, Meissn. in DC. (1854). Bay of Islands,
New Zealand; in fruit. The berry is void
and as large as an olive; from it the calyx
has fallen away completely, leaving no
persistent base. According to ^{Dr.} Hooker, all
the stamens are gland-bearing.

Tetranthera elaeocarpa, sp. nov. Feejee
and Samoan Islands: vide infra.

Tetranthera emmaderia, sp. nov. Feejee
Islands: vide infra.

Tetradenia (Cylicodaphne, sed calycis
maris obsoleto Glabrarie) Pickeringii, sp.
nov. Feejee Islands: vide infra.

Tetranthera Richii, sp. nov. Feejee Islands,
vide infra.

Tetranthera Brackenridgii, sp. nov.
Fueje Islands: vide infra.

Tetranthera Seemannii, Meissn. Fueje
Island, a form with much less coriaceous
leaves: vide infra.

Litsaea dealbata, Pres, var. glabrata,
Meissn. ? Luzon, Bantao, near Manila;
female plants only.

Gynerosperma

Cassytha Capensis, Meissn. ^{Hope} Cape of Good
Cassytha glabella, R.Br. Wollungung, N. S. Wales.
Cassytha rugulosa, Meissn. Sydney, N. S. Wales.
Cassytha pubescens, R.Br. Hunter's River, N. S. Wales.
Cassytha paniculata, R.Br. ? Hunter's River
and Sydney, New South Wales.

Cassytha filiformis, Linn. Society, Sand-
wich, Samoa. Fueje, and all the Coral
Islands. Also, apparently, Sydney, New
South Wales.

Lauraceae indeterminate: Two species
with only vestiges of flowers and fruit, ap-
parently of the Oreodaphneae tribe, from
the Feejee Islands. Foliage only of
several other species, none of them answer-
ing to Actinodaphne multiflora, Benth.
~~nor to Tetrandera palmaticornis, Meisn.~~
Foliage also of some Brazilian species.

1. Tetranthera elaeocarpa, sp. nov.

T. Conodaphne, Oppositifolia; glabrata vel glabra; foliis amplis ovalibus oblongis chartaceis obtusis vel acuminatis basim acutis penninerviis utrinque nitidis venosisque, ~~elegantibus~~ ~~per~~ ~~costas~~ ~~utrinque~~ prominulo elegante perfecto; inflorescentia cymosa, pedunculo communi petiolum adæquante. — a. Vitiensis: ramis venis costaque foliorum subtus tenites fusco-pubescentibus; bacca oblonga oleiformi sesquipollicari.

var. β. Samoensis: undique glabra; involucris tetraphyllis femineis 5-floris.

Hab. Feejee Islands: "on the mountain summit behind Muthuata, at the elevation of 2000 feet"; if this be, as I suppose, the Lauracea with opposite leaves and an elongated fruit" recorded in Dr. Pickering's notes (if so accidentally misplaced under Bismarck).

(but not found ^{recorded in the notes} among
Samoa Islands) with female flowers.

The specimen recorded as from the
Samoa Islands may be safely united
with those of the Feejee Islands, differing
only in the pubescence ^{of the latter}, which is evidently
rather deciduous. The leaves are charac-
teristic, ~~the~~ being opposite, or rarely subop-
posite, mostly from 5 to 9 inches long, and
2 to 3½ broad, shining both sides; the
primary veins (7-9 pairs) and costa prom-
inent beneath and impressed above; the
secondary veins and beautifully reticulated
veinlets conspicuous on both faces. The
best developed fruit is an inch and a half
in length and olive-shaped, its calyx
wholly deciduous. The Samoa plant ^{has} ~~fruit~~
female flower-buds in a small dichoto-
mous cyme; the ~~4-leafed~~ involucre of four
scales, sericeous-pubescent, a six-parted sericeous
calyx and a glabrous pistil. The male
flowers are unknown.

Tetraranea, Jacq.

2. Tetraranea enneaenia, Sp. Nr. (Tab.)

T. Comodaphne, Alternifolia; foliis amplis
chartaceis late ovatis subacuminatis basi
rotundatis vel truncatis margine revolutis
supra glabris subtus ^{calbo-} ^{penninerviis,} glauco ~~costis~~
utrinque 7-9 subtus fortiter expressis cum
petiolis ramisque ferrugineo-tomentu-
lois; umbellis in pedunculo communis
brevisimo fasciculatis ^{petiolo brevioribus;} involucris tetra-
phyllis; calyce sexpartito; staminibus 12,
filamentis 3 exterioribus e glandulosis, ceteris
medio glandulas 2 subsessiles gerentibus.

Tab. Ovolau, Feejee Islands.

(By Mr. Brackenridge, who collected the specimen,
This is noted as a "tree, thirty feet
high", with broad-ovate leaves, 8 inches by
five, green and smooth above, the lower
surface glaucous-white and nearly gla-
brous, wholly penninerved; the very prominent

midrib and primary veins on that side
ferruginous, these connected by rather
conspicuous ^{leaf-buds not perulate.} transverse veinlets. } Staminate
flowers only gathered. Filaments slender,
villous, the those of the outer series
only destitute of glands. - By the fruit
this may prove to be a Cylicodaphne,
but that genus will hardly stand.

There is some foliage in the collection
which may belong to the same or to a
nearly related species: the leaves are over
a foot in length and acute at the
base.

Plate

Tetrastemon enneadenia.

2. Tetrastemma (Cylicodaphne) Pickeringii, Sp. Nov.

fere glabra;
foliis ovatis submembranaceis basi
saepius e rotundata acutis, subtus
albo-glaucis ^{nunc subtripplinerviis} ~~perinerviis~~, Costis utrin-
que 5-6 prominalis, inferioribus in ax-
illis barbatis, ~~imixtis tenuioribus~~ ~~basi-~~
~~laribus~~, venis venulisque tenuiter re-
ticulatis inconspicuis; pedunculis ~~ho-~~
~~ribus~~ petiolo ^{multo} brevioribus, masculis
solitariis, femineis saepius binis
3-5-floris; involuero tetraphyllo;
(Calyce maris) nullo, staminibus
12, filamentis omnibus infra apicem
biglanduliferis; fruct. bacca (junior)
calycis tubo in capsulam trunca-
tam converso cincta.

Hab. Orolan, Feejee Island. The
foliage also collected by Dr. Seemann (no. 378).

A tree or shrub, "18 to 25 feet high,"
with slender branchlets, which are some-

what fuscous-pubescent when young.
Leaves $2\frac{1}{2}$ to $4\frac{1}{2}$ inches long, obtuse, acute,
or acuminate, thinish, glaucous-white
beneath; the principal veins few, the
lowest pair basilar and commonly
slender, the next pair usually the
strongest, and sometimes making the
leaf appear as if tripinnate. Pe-
tiol slender from half an inch to an inch
long. Common peduncles 3 lines long.
~~Filaments~~ Filaments slender, all
antheriform, and with a pair of ses-
sile glands a little below the apex,
below sparsely villous, all but the
three innermost connate at the base
into a minute cup; besides which
there is no calyx. The female plant
we have in young fruit only: the pedic-
els (usually 3 or 4) a line and a half long,
short, clavate, about the length of the
truncate capsule.

The presence of this capsule refers our
plant to Cyllocodaphne, while the male
flowers exhibit the character of the Glabrania
section of Tetraneura, only the stamens are fewer.

and (as in ^{some} other Oceanic species) all
gland-bearing.

4. Tetranthera Richii, sp. nov. (Tab.)

T. glabra; foliis ellipticis utrinque suba-
cutis subcoriaceis nitidulis penninerviis,
costis utrinque 6-7 venisque tenuibus, rete
subtili, petiolo gracili; pedunculis
~~Am~~ fasciculato-racemosis in pedunculo
communi brevissimis; involucri tetraphyllo;
masculo 5-floro; calyce 6-partito; staminibus
9 omnibus glanduliferis glabris.

Hab. Ovalau? Feejee Islands.

Only the male plant, and with un-
developed flower-buds. From its resemblance
to the next, it is likely to have the fruit of
a true Tetranthera. Leaves about 3 inches
long, of the same green hue on both sides,

and the delicate veins and veinlets about equally
conspicuous, but the ultimate reticulation
of the upper surface finer, ^{so as to be} and nearly scro-
biculate; petiole 14 to 18 lines long. Pedun-
cles barely pubescent when young, soon gla-
brate. Involucre glabrous.

Plate

Tetraneura a. Richii.

G. Tetranchera Brackenridgii, Sp. Nov.

T. glabra; foliis ellipticis oblongisve basi
acutis subcoriaceis subtus glaucescentibus
penninerviis, costis tenuibus, rete supra
obsoleto infra tenui; pedunculis petiolo
dimidio brevioribus fasciculatis absque
pedunculo communi; involucri tetra-
phylo bifloro; calyce 5-partito; staminibus
12 unitis biglanduliferis; bacca ovoidea
calycis basi patelliformi imposita.

Stat. Feejee Islands: in fruit, the
male flowers collected by Storck, no. 903
of Dr. Seemann's list.

Leaves $1\frac{1}{2}$ to 3 inches in length, obtusely
acuminate or obtuse, wholly penninerved,
the main veins 5 to 7 on each side of the
midrib, obscure above and little conspic-
uous beneath; the upper surface dull or
scarcely shining; the lower glaucous or
glaucescent, the network inconspicuous and

with much larger and looser meshes
than in the foregoing species. Petiole 4
to 8 lines long. Flower-buds very small.
Berries half an inch long.

(in db.)
6. Tetranthera Seemannii, Miessn.

T. glabra; foliis parvulis oblongis ovali-
bus ovatisve obtusis basi acutis vel ob-
tusis subtus glaucis triplynerviis
subtiliter reticulatis; petioli brevi; pe-
dunculis solitariis brevibus; involucrio
tetraphyllo 5-floro; staminibus 9 omnibus
vel pleris glanduliferis basi pilosis. —
Forma a. rigida: foliis rigide cori-
aceis, rete pagina superioris obscuro
vel oblitterato. — Forma ^{chartacea} b. foliis char-
taceis vel tenuiter coriaceis fortiter
triplynerviis supra lucidis utrinque
tenuiter reticulatis.

Hab. Feejee Islands.

Our specimens are obviously of the same species as Seemann's no. 374, although the leaves are much thinner, scarcely coriaceous, greener above and white beneath, and quite strongly triple-ribbed underneath. One probably grew in the shade, and the other in dry and exposed places. Both are male plants, and with unexpanded flower-buds. ^{Male flowers with distinct but short calyx-lobes.} Female flowers unknown.

Tetranthera palmatinervia, Meisn. in Ob. 15, p. 193, not found by our naturalists, ~~which~~ is evidently related to the above and, like it, is known ^{with} male flowers only. The flowers examined by me showed no calyx-lobes, six stamens in a ring from the margin of the reduced ^{hairy} calyx-tube, and one or two less perfect ones within, - all of them gland-bearing.

Ord. Potuacae

Petrophila pulchella, R. Br., Sydney,
New South Wales.

Isopogon anethifolius, Knight & Salisb.,
Sydney, New South Wales.

Isopogon anemonifolius, Knight & Salisb.,
Sydney, New South Wales.

Conospermum ericifolium, Smith,
Sydney, New South Wales.

Conospermum taxifolium, Smith, & var.
Brownii, Meism. (the variety with unusually long
leaves), Sydney, New South Wales.

Conospermum longifolium, Smith, & var.
lingulatum, Meism., Sydney, New South Wales.

Symphionema montanum, R. Br., Sydney,
New South Wales.

Personia Tora A. Cunn., Bay of Islands,
New Zealand.

Personia linearis Andr. Bot. ^{Rep.} ~~sp.~~ I. 77
Cooks River, ~~New South Wales~~, ^{the} ~~linearis~~ var.
latior, Kewington, New South Wales.

Perovnia hirsuta Pers., Sydney,
New South Wales.

Perovnia lanceolata Andr. Bot. ^{Rep.} ~~Rep.~~
t, 74, Sydney, New South Wales. (The stipe
of the ovary has a more or less distinct articulation.)

Perovnia salicina Pers., ~~Labillardiere Bay~~
~~Island New Zealand, perhaps a mistake; more~~
~~likely to come from~~ ^{Sydney,} New South Wales.

Perovnia ferruginea, Smith, Sydney,
New South Wales.

Grevillea unicea R.Br., Sydney, New
South Wales.

Grevillea linearis R.Br., Sydney,
New South Wales.

Grevillea buxifolia R.Br., Sydney,
New South Wales.

Grevillea sphacelata R.Br., New
South Wales.

Grevillea Caleyi R.Br., New
South Wales.

Hakea puginiformis Cav., Sydney, New South
Wales.

Hakea acicularis R. Br., Sydney, New
South Wales.

Hakea gibbosa Cav., Sydney, New South
Wales.

Hakea dactyloides Cav., Sydney, New
South Wales.

Lambertia formosa Smith, Sydney,
New South Wales, New South Wales.)

Gyloniella pygmaea Knight & Salisb.,
Knightia excelsa R. Br., Bay of Islands,
New Zealand, (follicles occasionally 5 & 6 sided.)

Embothrium coccineum Forst., Orange
Harb., ~~Terra del Fuego~~, ~~Fuegia~~.

Lomatia silaifolia R. Br., Sydney,
New South Wales.

Banksia ericifolia Linn. f., Sydney, New
South Wales.

Banksia spinulosa Smith, New South
Wales, (leaves hardly a line in width.)

Banksia marginata R. Br., New South
Wales.

Banksia integrifolia R. Br., Sydney, New
South Wales.

Banksia latifolia R. Br., Sydney, New
South Wales.

Banksia oblongifolia, Cav., Hunter's
River Australia, New South Wales.

Banksia serrata, Linn. fil., Sydney,
New South Wales. (Among the specimens
a form occurred with the very sharply serrated
leaves, from six to eight inches long, and seven to
nine lines wide.)

Ord. Santalaceae,

Quinchamalium majus, Brongn.
(● which, with Q. gracile, would appear to be not distinct from Q. chilense, Lam.), collected in Chile, from Valparaiso to the mountain region.

Arjona tuberosa, Cav. β . Patagonica, A. DC., at Rio Negro, North Patagonia.

Thesium australe, R. Br., at Hunter's River, New South Wales.

Thesium spicatum, Linn., ^{and} T. paniculatum Linn., at the Cape of Good Hope.

Nanodea muscosa, Banks, at Orange Harbour, Freesia, in fruit.

Leptomeria acida, R. Br., at New South Wales.
Santalum watsoni, R. Br.?, at Sydney, New South Wales.

Santalum acuminatum, A. DC., at Sydney, New South Wales: foliage only.

Santalum Cunninghamii, Hook. f. (S. Mida, Hook. f.), at New Zealand.

Santalum Gasi, Seem, at the
Feejee Islands: vide infra.

Santalum Freycinetianum, ~~Gaud~~
Gaudich., and varieties, Sandrich
Islands: vide infra.

Santatum pyralarium, sp. nov.,
Sandrich Islands: vide infra.

Exocarpos Gaudichaudii, A. DC.,
at the Sandrich Islands: vide
infra.

Exocarpos cupressiformis, Labill., at
Sydney, N. New South Wales.

1. Santalum, Lin.

1. Santalum Gasi, Seem. (Tab.)

S. foliis chartaceis oblongis, ovato-oblongis lanceolatisque in juvenilibus haud raro ~~longe~~ linearibus utrinque acutiusculis; cymis plerisque lateralibus ^{paniculatis} parvis; perigonii tubo obconico, lobis ovatis (~~saepe 5~~); disci lobis incrassatis obvato-truncatis filamenta (antheris aequilonga) adaequantibus; ^{stylodelongato;} drupa pisiiformi, putamine levi.

Santalum Gasi, Seem. in Bon-Mandria, 9, p. 258, sine char.
S. diversifolium, Rich in Hert.,
nec A. Db.

Stat. Feejee Islands, at Sandalwood Bay.

This Feejean Santalum in its broad-leaved forms most resembles S. album, but it is less, if at all glaucous, and has rather smaller flowers, perhaps shorter filaments, and the anther-cells are a little narrowed at the base. The narrow-leaved forms appear to be analogous to S. album var. myrtifolium A. DC. (S. myrtifolium, Roxb.), which is said to have lanceolate leaves. The lobes of the disk are just as in S. album. Young plants produce slender, linear or linear or lanceolate, ^{willow-like,} ~~leaves~~ thin leaves, 4 or 5 inches long, and only 3 or 4 lines wide. Some of these are figured upon the plate prepared under Mr. Rich's direction, along with a flowering specimen of the broadest-leaved form.

Plate Santalum Gasi.

A broad-leaved specimen ~~and with the~~ and
a shoot from a young tree with long
● and narrow leaves. Fig.

More details under

2. Santalum Freycinetianum,
Gaudich. (Tab.)

S. foliis coriaceis vel subchartaceis
late ovalibus ^{varius} obovatis ellipticis) oblanceolato-oblongis; cymis terminalibus lateralibusque paniculatis multifloris; floribus ad apicem ramulorum 3-9 subsessilibus; perigonii ^{tubo} obconico lobis ovatis vix longioribus; disci lobis ovatis obtusissimis filamentis brevioribus; stylo elongato; drupa ovoideo-globosa (haud semipollicari), putamine leviusculo. —
Inter formas variabile:

Var. a. Gaudichaudii; foliis ovato-oblanceolatis in petiolum brevem attenuatis.

Santalum Freycinetianum, Gaudich.
Bot. Freyc., Voy. t. 45: foliis minus angustis,

Var. β , ellipticum: foliis chartaceis vel subcoriaceis ellipticis oblongis seu ovali-obovatis, petiolo gracili.

S. ellipticum, Gandich. l.c. p. 442,
A. Db. Prodr.; Gray in Proceed.
Amer. Acad. 4, p. .

Var. γ , latifolium (Gray, l.c.): foliis magis coriaceis late ovalibus seu rotundatis, petiolo saepius brevissimis.

[S. paniculatum, Hook. & Arn. Bot.
Bech. Voy. p. 94.

Var. S. paniculatum (Hook. & Arn. Bot. Bech. Voy. p. 94.)
Hab. Sandrich Islands: (Oahu, Hawaii, Maui, &c.)

The Sandrich Island Sandalwood, once so important a tree commercially, is variable even beyond its congeners. The two species imperfectly characterized by Gandichand and the third

by Stocker and Arnott, are pretty clearly forms of one, which was first collected by Menzies, and of which the most narrow-leaved form known was figured by Gaudichaud as S. Freycinetianum; a thinner-leaved and slender-petioled form with the inflorescence usually axillary, is his S. ellipticum; and the form with thick, rounded, short-petioled leaves, and either axillary or terminal cymes, is S. paniculatum, Stock. & Arn. The flowers are either rose-color or dull, according to circumstances, and only two or three lines in length. Stigma often 4-lobed. Drupe ovoid-globose, between a third and half an inch in length, with a thin pulp, the pericarp almost even, ^{hardly} ~~scarcely~~ at all rimose or corrugated. Embryo slender: radicle rather larger than the cotyledons.

Plate . Santalum Freycine-
tianum. Fig. 11, A drupe, of the nat-
ural size. 12, Vertical, and 13, trans-
verse, section of the pericarp, seed, and
embryo; enlarged.

3. Santalum pyrularium, Sp. Nov.
(Tab.)

S. foliis (aut tenuiter aut crasso-)
coriaceis oblongis ovalibusque sub-
tus glaucis; inflorescentia ^{floribus masculis;} preceden-
tis; perigonii tubo cylindraceo
lobis oblongis longiori; disci lobis
parvis angustis; stylo ultra an-
theras oblongas exsertis saepius ex-
serto; drupa pyriformi (cum pe-
dicello brevi incrassato pollicari),
putamine valde ruminato-rimo-
so.

Santalum pyrularium, Gray in Proceed. Amer.
Acad. L.C.

(supra lucidis virentibus)
Var. a. foliis oblongis ^{ter} ^{min} ^{ter} coria-
ceis, petiolo gracile; cymis ple-
nunquam lateralibus.

Var. β . foliis ovalibus ^{spacis,} crasso-coriaceis,
petiolo brevi crasso; cymis densiflo-
ris ^{plerisque} terminalibus.

Stat. Sandwich Islands: Var. a.
Kauai, on dry mountain ridges.
Oahu, coll. Kuny, no. 505. Var. β .
Maui, on the north bank of the crater
of Mouna Haleakala.

The two forms of this species here
indicated are analogous, ~~the~~ α . to
the var. ellipticum, and β . to the
var. latifolium of S. Freycinetia-
nium. Only the thinner-leaved
form was ^{characterised} ~~described~~ in the Proceed-
ings of the American Academy, above

cited, and is here figured. The thick-leaved form would appear to me is rigidity and its condensed habit to a more arid and exposed locality.

The characters relied on to distinguish the species are the much larger flowers (these being half an inch long), with a cylindrical tube which considerably exceeds the oblong lobes, the more elongated anthers, and (less definitely) the narrower lobes of the disk; also the larger and pear-shaped fruit (~~nearly~~ when well developed about an inch long, including the thickened pedicel into which it tapers), with a very rough rimose pericarpium. Embryo slender, nearly the length of the albumen. But of the var. β , we have only immature fruit, which is not so large, less pyriform, and does not show any roughness of the pericarpium.

Plate Santalum pyrular-
ium, a, in flower, also in fruit. Fig.
1. A flower. 2. Its upper portion laid
open. 3. Vertical section of a flower.
4. A stamen, outside view. 5. Inside
view of the same. 6. Pistil, ~~the~~ the way
vertically divided. 7. Vertical section of
a fruit. 8. Transverse section of a fruit.
9. Putamen, of the natural size.
10. Embryo detached. - All the de-
tails, except Fig. 9, more or less mag-
nified.

2. Exocarpos, Labill.

1. Exocarpos Gaudichaudii, A. Dc. (char.
emend)

E. ramulis striatis confertis; foliis di-
morphis, aliis squamiformibus, aliis
maxime evolutis 1/2-uncialibus el-
lipticis serrulatis; floribus 5-meris raro
4-meris glabris.

Var. a. "^{(rigidissima,} fruticosa, saepe decumbens; ramulis
densis; foliis minimis squamiformibus
obtusiusculis, paucis interdum evolutis
oblongis.

Exocarpos cupressiformis, Hook. & Arn. Bot
Beech. Voy. p. 95, non R. Br.

E. Gaudichaudii, A. Dc. Prodr. 14, p. 490.

Var. β. foliosa: arborescens; ramulis laxiori-
bus; foliis saepe evolutis semi-unc-
ialibus ellipticis seu obtrato-oblongis.

Stat. Sandwich Islands: a. Hawaii,
to the ~~high~~ elevation of 5500 on Mouna Loa,
β. Oahu, on the mountains behind Honolulu,

DeCandolle, describing from Gaudichaud's specimens alone, has not noticed the expanded leaves, which show themselves occasionally on the condensed and squamaceous form, of Hawaii, but are most common in the arborescent form of Oahu. They are true leaves, as much so as those of DeCandolle's first section of the genus, although sessile or nearly so, and by a twist at the base becoming vertical. When large they are more or less evidently 3-7-nerved. The flowers are well described in the Prodrôme, but are occasionally tetramerous: they are perfectly glabrous. Anther-ends nearly bilobed. ~~Stam~~ Stamen short-ovoid, 3 lines long, the base immersed in the short-obovate, red, fleshy cup.

Ord. Euphorbiaceae.

Euphorbia piscatoria, Ait. was gathered at Madeira.

Euphorbia Peplus, Linn., also gathered at Madeira. Likewise occurs among specimens ticketed as collected at the Bay of Islands, New Zealand. If correct, it is a waif from Europe. Dr. Storker does not mention it, but speaks of E. Stelioscopia as introduced into some parts of New Zealand.

Euphorbia Aegyptiaca, Boiss. (E. Firkalii var. a. Gay); St. Jago, Cape Verde Islands.

Euphorbia portulacoides, Spreng., var. acutifolia, Boiss. Rio Negro, North Patagonia, and at the Santiago, Chile.

Euphorbia ovalifolia, Engelm. in DC. Valparaiso, Chile.

Euphorbia hypericifolia, Linn., var. E. brasiliensis, Lam. & E. bahiensis, Boiss. Rio Janeiro, Brazil.

Euphorbia pilulifera, Linn. Rio Janeiro,
Peru near Lima. Tahiti, Society Islands.
Also Sandwich and Heize Islands, but not in the present collection.

● Euphorbia serperis, Kunth. Rio Negro,
North Patagonia. Var. Indica, Engelm. Hunter's
River, New South Wales.

Euphorbia Atoto, Forst. Samoan Islands
and Mindanao, Philippine Islands; with narrow
and inconspicuous appendages to the
glands. ^{New South Wales?} Feeje Islands, with appendages
nearly as large as in E. Charnissensis. All
with globose seeds! E. halophila, E. levis,
and E. obliqua, admitted by Boissier, are ap-
parently all forms of E. Atoto. We have
it not from Tahiti, the Society Islands, Forster's
habitat.

Euphorbia Taitensis, Boiss. (E. Atoto, Guill-
em., fide Forst. ex parte.) Tahiti; also in coll.
Pancher. Probably a mere variety of the
next.

Euphorbia Charnissensis, Boiss. (Chiosphyllum
Charnissensis, Kl. & Garke.) Metia, Society Islands,
Boral Islands (King's and Vincennes'). From
Dr. Harvey's collection we have it only from the

Friendly Islands. To this (from the specimen of *Forster* in Brit. Museum, which has rotund-ovate leaves, and the habitat, doubtless belongs *E. origanoides*, Forst., non Linn.

Euphorbia ramosissima, Hook. & Arn.:-
Some-*sonu*, Feeje Islands: sterile; but apparently the same as *Burnings*'s no. 1362, from Elisabeth Island. Probably a variety of the last.

Euphorbia clusifolia, Hook. & Arn.
Oahu, Sandrich Island. (Involute glabrous within in some specimens.)

Euphorbia Kemyi, sp. nov. Oahu (Kemy) and Kanai, Sandrich Islands.
vide infra.

~~*Euphorbia celastroides*, Biss. Oahu, behind Honolulu, *var. B. longifolia*, Kanai.~~
~~*vide infra.*~~

Euphorbia multiformis, Gandich.
Sandrich Island, in various forms: *vide infra.*

Euphorbia cordata, Meyen. Sandrich Island, Oahu and Hawaii: first collected by *Menzies*. (Appendages of the glands sometimes obsolete.)

1. Euphorbia, Lin.

1. Euphorbia Kemzi, Sp. Nov.

E. (Trisophyllum, Gymnadenia): fruticosa, erectis, glabra; ramis denticatis ad articulationes nodosis; stipulis in unam interpetiolaem triangulaem coactis; foliis breviscule petiolatis oblongis vel ellipticis submembranaceis lucidis teniter crebre perminerviis integerrimis subacutis vel subacuminatis, basi rotundata fere aquali varius angustata in aquali; cymis axillaribus 1-5 cephatis subsessilibus; pedicellis folio multo brevioribus; involucris campanulatis lobis minimis, glandulis transverse ovalibus; capsulae (aut glabrae aut tomentulosae) coctis vix carinatis; semine tetrangolo obovato serbiculato rugoso.

Hab. Sandwich Islands, Kanai, a very incomplete specimen (nearly destroyed by vermin) in the collection of the Expedition, with narrowly oblong leaves decidedly unequal at the base acute base.

(much broader leaved,
Oahu, Merry, no. 598) without fruit,
Hanalei, Kanai, N. Mann; ~~and N. Z.~~ in-
termediate in the foliage ^{between} the two
other known specimens.

A very distinct species, allied in char-
acter to E. chusiofolia; but much
taller, inclining to be simple-stemmed
and arborescent, glabrous, except the slight
pubescence on the involucre, and a ~~to~~
deciduous tomentum on the capsule
in Mr. Mann's specimen. Leaves from
 $1\frac{1}{2}$ to 5 inches long and from 10 to 20 lines
wide, ^{much} thinner than in E. chusiofolia
and the primary veins (from 20 to 30 pairs)
more evident, but the ultimate reticula-
tion of veinlets less distinct, the apex never
retuse, ^{Petioles 3-6 lines long.} usually pointed. Pedicels 2 or 3
lines long, sometimes solitary. Lobes of the
involucre almost obsolete, emarginate. Styles
short, their lobes short and thickish. Capsules
in the collection of the Expedition; very small,
acutely triangular-3-lobed, and glabrous; but
apparently not well formed, and with no mature
seeds: in Mr. Mann's specimen much larger,
2 lines long, the cocci obtuse on the back. Seed
coarsely scrobiculate-rugose.

2. Euphorbia multiformis, Gaudich.

Var. β . tomentella, Briss.; ramis junioribus
et foliis tomentellis.

Var. γ . tenuior; glabra; ramis gracilibus; fo-
liis ellipticis oblongisve tenuioribus
viridioribus.

Var. δ . lorifolia; glabra; foliis lineari-elon-
gatis (bipollicaribus) ~~rig~~ crassis; pedicellis
involucro 2-4-pto longioribus.

Var. ϵ . celastroides (E. celastroides, Briss.); glab-
ra; foliis obvato-oblongis spatulatisve
basi angusta truncato-subcordata; pedi-
cellis involucro pluries longioribus.

Stat. Sandwich Islands. β . Oahu.
 γ . Oahu, in Stillé's and Mann's collections.
 δ . Kauai: plainly connecting the nar-
row-leaved forms of E. multiformis with
the next. ϵ . Oahu, behind Honolulu: coll. ~~by~~
by Kemy on Nihoa, and a form (var. δ ?) on
Kauai.

Gen. Urticaceae

Subord. Urticeae,

The admirable monograph of Weddell

Urtica Magellanica, Poir. (near the form called U. Darwinii by Dr. Hooker), Orange Harbour, I. Megia.

Urtica dioica, Linn., ^{Chili,} in the environs of Valparaiso.

Urtica australis, Hook. f., Lord Auckland Islands.

Urtica andicola, Wedd, Urtic. p. 60, in the Andes of Peru, at Baños; the leaves in size and appearance resembling the following species.

Urtica Sandwicensis, Wedd. l.c., Hawaii, Sandwich Islands; - just like

Macrae's plant; the female perigonium gamophyllous to the summit.

- Eleurya ruderalis, Gaudich. (~~Sty~~
Schynchorskia ruderalis, Endl. in Ann.
Mus. Vindob. 1, t, 13), on the Coral
Islands generally.

Eleurya interrupta, Gaudich., var.
spicata, Wedd., Samoa and Feejee
Islands. This was collected on Hawaii
by Macrae, but is not in our col-
lection from the Sandwich Islands.

Laportea Starveyi, Seemann, Sa-
moa and Feejee Islands. Vide infra.

Laportea stimulans, Miq. (Urtica
stimulans, Linn. f.) was gathered at the
Mangsi Islands.

Urera glabra, Wedd. (Procris glabra,
Hook. & Arn.), Sandwich Islands, in the
mountains behind Honolulu. Also, var.
mollis, Wedd. (probably a distinct species) from Mowee-ke, Hawaii,
without flowers. Range as Macrae's plant.
Urera Jacquinii, Wedd., Brazil; in
the Organ Mountains near Rio Janeiro.
The form nearly answering to U. subpeltata, Miq.

Pilea pubescens, Liebm., in the
Organs Mountains, near Rio Janeiro.
Brazil.

● Pilea seplroides, Hook. & Arn., Oahu,
Maui, and Hawaii, Sandwich Islands;
the leaves varying from two to seven
lines in length, and mostly crenate,
sometimes almost round to the base.

Pellionia elatostemmoides, Gandich.
Bot. Voy. Bonite, t. 119; Wedd. Artic. t. 6;
well marked by the long-armed
sepals, was collected in the Majuizai
Mountains, Luzon; the female.

Pellionia Vitiensis, sp. nov., at
the Feejee Islands: vide infra

Procris Cephaliida, Commers. ex Wedd.
(Elatostema lucidum & E. pedunculatum, Forst.)
at the Society, Samoa, and Feejee Islands.
The male flowers in the specimens are
open-cymose, not glomerate, but the greater
part of them on fasciculate pedicels as long
as the calyx.

Elatostema rugosum, A. Cunn., at
the Bay of Islands, New Zealand.

Elatostema umbrosum, sp. nov.,
• Feeje Islands: vide infra.

Elatostema macrophyllum, Brongn.
Bot. Voy. Voy. t. 45, at the Feeje Islands,
when it was also collected by Dr. Harvey.

Elatostema sessile, Forst., at the
Society^{and} Samoan Islands, in various
forms, among them a variety, from the
Samoan Islands, with long-peduncled
male heads, which, like the var. grande
of Noddell, needs farther investigation
with better materials.

Elatostema sesquifolium, Hassk., at
Baldero, Mindanao, Philippine Islands.

Elatostema rigidum, Nodd., Luzon,
in the Majajai Mountains.

Elatostema obtusum, Nodd., Luzon,
in the mountains near Baños.

Elatostema podophyllum, Nodd., Luzon,

in the Majajai Mountains; sterile.

Elatostema diffusum, Rich, in
herb. sp. nov., Savaii, Samoan Islands;
• vide infra.

Elatostema ? at the Feejee Islands,
not in flower, resembling E. ? filicoides
(melius filicinum), Seemann, no. 421, also sterile: but the leaves are
less oblique, their teeth rather fewer
and coarser; the stipules bristle-pointed,
dark chestnut-colored, exceeding the short
internodes in length, and persistent; the
branchlets not ~~marginated~~ by decurrent-
marginated (as in Seemann's specimen).
The stems, moreover, are woody. Apparently
the same species occurs with larger leaves.

Boehmeria caudata, Swartz (B.
arborescens, Gaertn.), Brazil, near Rio
Janeiro.

Boehmeria platyphylla, Don, var.
virgata, MDD. (B. virgata, Forst. B. inter-
rupta, Guillemain), in various forms, at

the Society, Samoan, and Feejee Islands: vide infra.

Cypholophus macrocephalus, Wedd.
(which is *Boehmeria Starveyi*, Seemann, in *Complandia*, l. c. no. 431), at the Feejee Islands, the var. *heterophyllus*, Wedd. Also Tahiti, Society Islands, ^{King's Island,} and ~~Upolu~~, Samoan Islands, the var. *nuttii*, Wedd.; the Samoan specimens with very thin and large leaves. These are ticketed by Mr. Rich as "the Cloth-plant" of the natives. ~~It is this plant, I suppose, which is recorded by Dr. Pickering as having~~

Nerandia melastomifolia, Gandich., including *N. wata*, Gandich. Voy. Freyc., and ~~a form with~~ *N. sericea**, Gandich. Bot. Voy. Bonite, t. 133, a form with fine-fanny leaves; at the Sandwich Islands; the typical smooth form on Oahu; Nuttall's var. β . on Hawaii, and form answering to

Gaudichaud's, N. sericea on the mountains of Kauai.

● Toucharia latifolia, Gaudich., Bot. Voy. Bonite, t. 94, Nodd. Artic. p. 142, t. 13; Sandwich Islands, on the mountains of Oahu behind Honolulu; also, with very large and roughish leaves, more pubescent on the ribs, on Kauai. The specimens add nothing to the published figures and the excellent description by Weddell.

Pipturus asper, Nodd. Artic., in the vicinity of Manila, Luzon.

Pipturus albidus (Boehmeria, Hook. & Arn., Sandwich Islands); vide infra.

Pipturus velutinus, Nodd., Trav., from west of the South Sea Island; vide infra.

Pipturus gracilipes, sp. nov., Feeje Island; vide infra.

Missiessya corymbulosa, Wedd. Artic.
(perhaps too near M. celtidifolia), at the
Teejee and Sanvan Islands; vide infra.

Maoutia australis, Wedd. Artic.
p. 480 (named M. Tahitensis in Dr.
Scemman's list), at the Teejee Islands,
also collected by Dr. Harvey.

Phenax vulgaris, Wedd., Brazil, in
the vicinity of Rio Janeiro.

Phenax laevigatus, Wedd. Artic. t. 16,
Peru, in the vicinity of Obajilla.

Parietaria officinalis, Linn., gathered
on the coast of Madeira.

Laportea, Gaudich.

1. Laportea Harveyi, Seemann.

L. arborea, inermis, undique glabra; foliis late ovatis subserratis prope
basim cordata subcordatam ^(vel) emargin-
atam triplinerviis; cymis pedun-
culatis utrisque decompositis dif-
fusis, divisionibus ultimis ^(conferti-) glomeru-
floris, pedicellis feminearum brev-
issimis carnosio-incrassatis; perigo-
nio femineo minimo subaquali-
ter 4-lobo; stigmatibus subulato-fili-
formi; achenio parvo granuloso-
asperato.

Laportea Harveyi, Seemann in
Bomplandia, 9, p. 259, sine char.

Hab. Treeje Island, also collec-
ted by Dr. Harvey and Dr. Seemann.

Savaii,
~~Upolu~~ } Samoan Islands.

Although no stinging hairs appear, this is called "the stinging tree". The imperfect male specimen from the Samoan Islands is said by Dr. Pickering to have been "brought ^{by the first king} from Interior Savaii". The tree was heard of on other islands of the group, as much dreaded by the natives: the living leaves are said to sting severely, if the part exposed be wet." The Feejean specimens Dr. Pickering records among the introduced plants. They were from "a single spreading tree, thirty feet high, with the trunk a foot in diameter, planted near the muse house at Levuka. The pain from the application of the leaves is said to recur for many days." From our own collection and that of Dr. Harvey we

have male flowers only. Dr. Seemann's
have the fruit, which is many times
smaller than that of L. crenulata,
barely a line long, flat, and roughish-
granulated, the calyx ~~almost~~ very mi-
nute, almost obsolete. Male cyaxes
very diffuse and decomposed, the
divisions and pedicels filiform.
Impacts obsolete.

Leaves smooth, usually very broadly
ovate, acute, and ^aslightly with the
broad base slightly cordate, 6 to 9
inches long, 3 to 7 inches wide, either
rather obscurely or decidedly serrate.

This plant has much the aspect of Urua
glabra.

Seemann's Lapidea Wilkesii,
said to be near L. photiniphylla, does
not occur in our collection.

Pellionia, Gaudich.

1. Pellionia Nitensis, sp. nov.

P. dioica; ramulis puberis glabratissimis;
foliis (maxime disparibus, altero
minimo rotundato, vel ~~saepius~~ abortu
~~ante~~ homomorphis alternis) ovatis
seu ovato-vel oblongo-lanceolatis
plerumque caudato-acuminatis
basi obtuso vel subacuto margine
fere toto serratis ~~obli 3-4 et tripli~~
3-4-plinerviis, costis venisque subtilis
prominentibus; inflorescentiis mascu-
lis effuso-cymosis pedunculatis, femin-
eis ~~in glomerum~~ ^{in glomerum} ~~apicibus~~ contractis ~~in axil-~~
~~la~~ sessilibus; perigonio femineo 4-
5-partito, segmentis inequalibus, 2 ma-
joribus lineari-spathulatis sub apice
umbonatis 2-3 minoribus lineari-
subulatis.

Itab. Freeze Islands: collected also by Dr. Harvey (female) and Dr. Hermann (sterile).

Dr. McDell cites the Freeze Islands (Mikne) as a habitat of P. elatostemoides; and Dr. Hermann referred his no. 429 to that species, which it certainly is not, as the triple or quadruple-nerved leaves plainly show. It is doubtless a smooth and broad-leaved form of the present species. We have the male plant with similar large leaves (from 4 to 7 inches long and 2 to 4 inches wide), but with the ribs and veins beneath, as also the petioles and the young shoots, more or less minutely pubescent. Dr. Harvey's and our own collections have it with much smaller and narrower leaves, the former with good female flowers. The base of the leaves is generally cuneate, but in the broadest form rounded

or even obliquely subcordate, in the narrower forms more tapering into the short petiole. The larger primary veins from towards the base of the lamina are strongly ascending, ~~the first~~ forming ribs, the first on the larger side reaching hardly to the middle of the lamina, the next one higher up on the narrower side almost as stout as the midrib itself, which thus seems to fork, and it reaches to ~~the~~ near the base of the considerably prolonged acumination. This acumination is either gradual or somewhat abrupt, and is always serrate; the serratures extend downwards to near the base of the leaf, are either coarse or fine, but are more regular and sharper than in P. elastomoides. Stipules pretty large, lanceolate, attenuate, caducous. Male cyme open and

decompound, on a peduncle of twice the length of the petiole, bracteate at the divisions, the ultimate divisions or pedicels longer than the flower. Calyx 5-parted, the divisions obovate, imbricated in the bud, short-mucronate on the back; vestige of the pistil, &c, as in the tribe. Female flowers on pedicels longer than the calyx, but all crowded into a sessile or nearly sessile, capitate, axillary glomerule, the calyx less than a line long, its larger divisions unbovate, rather than mucronate just behind the tip; the smaller divisions very slender, not larger than ~~or~~ wider than the line or staminal filaments. Achenium not seen.

However various as to the size and shape of the leaves, all the forms may confidently be referred to one species.

Elatostema, Forst., Medd.

1. Elatostema umbrosum, sp. nov.

E. caule appresso-pubero; foliis membranaceis ^{lanceolatis} ^{obovatis} ^{petiolatis} ^{obovato-lanceolatis} acumina-
tis a basi obliqua acuta usque ad
summum apicem grosse obtuseque
dentatis penninerviis ^{ut laxe reticulatis} utrinque his-
pidulis et asperulatis; stipulis oblongo-
lanceolatis mox deciduis; capitulis bre-
vissime pedunculatis.

Hab. Feejee Islands; ^{in forest} on the mountains
of Ovalau, at the elevation of 1500 feet.

This species most resembles E. rugosum of New Zealand. But the
leaves (4 or 5 inches long) are less ^{unequal} oblique
at the base and more distinctly petioled
and the strong serratures are broad and
blunt: ~~as~~ these extend to the tip of the

acumination. The heads are sub-
sessile, and involucrate with large bracts.
The flowers are not sufficiently devel-
oped to furnish characters. The
wholly pinninerved leaves distinguish it
from every form of *E. sessile*.

2. *Elatostema diffusum*, ^{Sp. Nov.} Michx in herb.

E. ramosissimum, glabellum; foliis lan-
ceolatis acuminatis basi acuta vel
hinc obtuso subsessilibus pinninerviis
grosse serratis, dentibus utrinque 5-8;
stipulis parvis ^{tenui-scariosis} ovatis ~~sub~~ persistentibus;
capitulis ^{parvis} sessilibus seu masculis
(superioribus) pedunculatis.

Var. a. *agrimonioides*: foliis profunde
seu inciso-serratis, dentibus obtusi-
usculis.

Var. β . angustatum: foliis lineari-lanceolatis, dentibus minoribus acutiusculis subappressis.

Stat. Savaii, one of the Samoan Islands: a. in the bed of a watercourse three miles from the sea; β . in the deep interior forest.

Branches minutely appressed-pubescent or glabrate. Leaves sparsely and minutely hispidulous or glabrous, an inch or an inch and a half long, 3 to 5 lines wide, or narrower in var. β ., with 5 to 7 slender primary veins on each side of the midrib, slightly oblique at the base; the teeth very strong and salient in var. a. ($1-1\frac{1}{2}$ lines long; in β . much less conspicuous and appressed. Heads small, pubescent.

Boehmeria, Jacq.

● 1. Boehmeria platyphylla, Don,
(Tab.)

Var. virgata; foliis ovatis oblongisve pl. m.
acuminatis nodice crenato-dentatis
vel crenato-serrulatis; ~~spicis~~ (basi
raro subcordatis); spicis masculis
paniculatis, foemineis / sapius longis-
simis. (quandoque androgynis)

Urtica virgata, Forst. Prodr. p. 66.

Boehmeria virgata & B. interrupta,
Grillen, Reph. Tait. p. 30.

B. Tartensis, Wedd. in Ann. Sci. Nat.

B. interrupta ^{ser. 4, 1, p. 205} (Sandwich.), Blume, Mus. Bot. Lugd.-Bat. p. 219.

B. platyphylla, var. c, virgata, Wedd.

Urtic. p. 366.

(Simeon and)

Tab. } Tahiti, Society Islands; the
ordinary Oceanic form; and males
only specimens collected are males, of a

Very large and broad-leaved form (6 to 8 inches long) and correspondingly long-petioled, ^(from Lake Waikiriā) Samoan and Feeje Islands; a form with smaller leaves, either glabrate or ~~pubes~~ ^{slender,} tomentulose-pubescent, and the ~~long~~ ^{or "tub"} interrupted, pendulous female spikes from one to three and a half feet long. The Oceanic specimens all have so much smaller and blunter ^{more} or crenate teeth than the Indian *B. platyphylla* that I should be disposed to restore Forster's species. But Archipelagian specimens appear to combine the two. The ~~leaf~~ ^{tooth}ing of the leaves alone distinguishes these very long-spiked specimens from the var. *macrostachya* (*Splitgerbera macrostachya*, Wight, Ic. t. 1977.)

Plate A. *Boehmeria platyphylla*, var. *virgata*: female plant, from

the Iucie Islands. Fig. 1. Female
glomerule, enlarged. 2. A flower and its
bract of the same, more magnified. 3. Lon-
gitudinal section of the last. 4. Piece of
male spike, in bud, magnified. 5. Male
flower expanded. 6, 7, Stamens more mag-
nified.

N. Hipulais Nutt. all by Mann.

Pipturus, Nees.

1. Pipturus albidus.

Boehmeria albidus, Hook. & Arn. Bot.
voy. Beech., p. 96.

Pipturus Jartensis & P. Gandichan-
dianus (in Monogr. Artic. P. Gandi-
chandianus), Nees, in Ann. Sci.
Nat., ser. 4, 1, p. 197.

Stat. Sandwich Island; on Oahu

and Hawaii, up to the elevation of 5000 feet.

To this, the Tapa plant of the Sandwich Islands, I restore the original specific name given by Hooker and Arnott. For it was surely by some oversight that Meddell named it Taitensis, as there is no pretence that it was ever found at Tahiti. Meddell's species P. Gaudichaudianus, which he afterwards reduced to a variety of his P. Taitensis, is a form with thicker and rough leaves, their lower surface nearly or quite destitute of whiteness. Some of our Hawaiian specimens approach it.

2. Pipturus velutinus, Nedd.

Var. a. hypoleucus: foliis subtus pube-
• ~~tenis~~ appressissima glauco-incanis.
Pipturus velutinus & P. propinquus, Nedd. l. c.,
cum sign.

Var. β . tiliaceus: foliis ovato-cordatis
obtusius acuminatis nunc cordato-
rotundis subtus pube molli vix
albida velutinis, petiolis ramulis-
que hirsuto-pubescentibus.

Stat. The ordinary state, with the
leaves variable in size and shape,
but always whitened ~~base~~ or white-to-
mentose beneath, from the Society,
Samoa, and Feejee Islands; also on King's,
one of the Coral Islands, and Mangsi Is-
lands. The var. β . on Karaka, Carls-
hoff and Vincennes (Coral) Island, and
Nanna-levu of the Feejee Islands, the
latter specimens approaching the original
of Labillardiere.

3. Pipturus gracilipes, Sp. Nov.

P. ramulis termiter puberulis max gla-
• bratis; foliis ^{membranaceis} ellipticis seu ovali-ova-
tis plerumque acuminatis ultra
medium obtuse serratis ~~versus~~ ^{versus} basin
versus rotundatam vel obtusissimam in-
tegrissimis utrinque viridibus glabris,
petiolo longo filiformi; glomerulis
(foemineis) in spicas simplices fili-
formes dispositis; perigonio foemineo
canescenti-puberulo.

Hab. Feejee Islands.

This appears to be a very distinct species. The thin membranaceous leaves are 2 to 4 inches long, on very slender petioles of one to 4 inches in length, rather sparsely serrate, entire towards the usually rounded base, and glabrous, except a minute trace of puber-

lescence on the principal veins or ribs underneath. The ribs and veins are slender and not prominent. Female spikes simple, 2 or 3 inches long; the rachis filiform, the globular clusters small. Filiform stigma very caducous.

Missiessya, Gaudich.

1. Missiessya corymbulosa, Nodd.

Hab. Feejee and Samoan Islands (female plants; at the former also collected by Dr. Harvey and Dr. Seemann.

Plate B. Missiessya corymbulosa, Nodd., smaller-leaved form. Fig. 1. Female capitulum, enlarged. 2. A flower from the same prope magnified. 3. Vertical section, ~~of the same~~